

IP Debt Finance and SMEs: Revealing the Evolving Conceptual Framework Drawing on Initiatives from Around the World

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Just as physical assets were used to finance the creation of more physical assets during the industrial age, intangible assets should be used to finance the creation of more intangible assets in the information age.

—Intangible Asset Monetization, Athena Alliance, 2008

Abstract This chapter surveys and analyses how the increased integration of the intellectual property (IP) rights system within the globalized economy could accelerate business outcomes for young IP-rich small and medium size enterprises (SMEs) if lenders adopt a new mind-set to IP-backed debt finance. The phenomenon of globalization, namely, the increased interconnectedness of the world's countries, has a profound influence on the business, legal and finance framework. In this post-financial crisis environment, the banking and finance sector has largely retreated from traditional lending practice. Although access to finance is a universal issue, how can IP-backed debt finance grow in a globalized world? What IP finance trends and initiatives are currently afoot to support national competitive advantage and economic growth? The range of international initiatives to enhance IP-backed debt finance has never been fully explored in any of the innovation or IP finance literature. This chapter reviews a variety of international initiatives being undertaken to facilitate the expansion of IP-backed debt finance to improve liquidity and to support young IP-rich SMEs in the UK, the E.U., the US and Asia. It attempts to set a high level agenda for informing IP debt financing for SMEs policy. It also analyses the contributions of certain regional Intellectual Property offices, international inter-governmental organizations, the World Intellectual Property Office (WIPO), the United Nations Commission on International Trade Law (UNCITRAL) and leading commercial banks in this regard. By combining the body of knowledge emanating from over two decades of developments from a global perspective, this chapter

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© Springer Nature Singapore Pte Ltd. 2017
T. Kono (ed.), *Security Interests in Intellectual Property*, Perspectives in Law,
Business and Innovation, DOI 10.1007/978-981-10-5415-0_1

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provides a synthesized understanding to inform future IP finance policy directions. It introduces the systemic changes needed to support the agile development of globally enhanced SME access to IP finance in the post-recession economy.

1 Introduction

Governments in a number of countries are evaluating their intellectual property (IP) frameworks to further their understanding of how IP can help shape sustainable economic growth, whether they are mature economies who wish to maintain their competitive edge in the global market, or emerging economies seeking to build up their economic base. This chapter focuses on intellectual property (IP) assets within the context of the wider term ‘intangible assets’¹ which includes such things as goodwill or intellectual capital. The internationalization of the debate over the viability of IP-backed debt finance is due in part to the increasing economic importance of IP. IP is a bundle of legally created rights that arise through law.² The term IP itself refers to: creations of the mind, such as scientific inventions; literary and artistic works; designs; and commercially employed symbols, names and images. In the IP law framework, they entail complex intangible legally recognized exclusive rights.³ In order to come into existence, some IP rights must be registered with the relevant national statutory registry (e.g., patent, trademark and design registries) though certain IP rights subsist even as unregistered rights (e.g., copyright and confidential information). IP rights are personal property rights protected in law, which enable people to earn recognition or financial benefit from what they invent or create. IP is like any other property, allowing the creators, inventors or owners of IP rights to benefit from their own work or investment in a creation by licensing or selling their IP rights.⁴ As such, in commercial terms they are assets which can be used to generate additional value or provide liquidity and in accounting terms, assets are credits to the balance sheet.

¹In accounting, banking and finance and company law terms, intangible assets are those whose value equals the aggregate market share value less the portion that can be explained by tangible assets.

²IP rights are intangible assets are assets that do not have a physical or financial embodiment. They have also been referred to as knowledge assets or intellectual capital in other non-legal disciplines.

³See WIPO (2011), <http://www.wipo.int/publications/en/details.jsp?id=99&plang=EN>. Accessed 13 May 2017.

⁴See WIPO (2011), <http://www.wipo.int/publications/en/details.jsp?id=99&plang=EN>. Accessed 13 May 2017. IP rights are confirmed in Article 27 of the Universal Declaration of Human Rights and their importance was first recognized in the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886). Both treaties are administered by WIPO.

From a legal perspective however, most jurisdictions do not offer adequate legal means for IP financing, a concept which refers using IP rights to obtain or secure finance. We should first specify what is meant by 'security'. The basic questions of the theoretical literature concern why debtors grant security for their loans and how security is used by debtors to mitigate market imperfections and whether this is socially beneficial.⁵ In Anglo-American law secured finance provides asset-based priority credit. A secured debt has full priority over any unsecured claim on insolvency. Certain academic fields such as law, economics, accounting and finance are increasingly aware of these deficiencies, and the issue of IP financing is the subject of policy development at the international level. Although IP policy is now firmly established in the political arena, there is still a need to help governments understand the different components needed to create a platform to encourage IP financing of transactions and to stimulate the growth of innovative and creative industries.

Further, across the world the mainstream financial press is now more aware of the value of IP assets as a core component of business strategy. High profile IP corporate finance stories with global impact have been widely reported in recent years. These involve multi-national companies operating in a variety of industrial sectors, including Apple, Disney, Facebook, GSK, Lucasfilm, IBM, Microsoft, Samsung, Sony, Toshiba, Panasonic and Pfizer, to name a few. Although the increased awareness of the value of IP assets has mainly focused on high profile global corporations, in most OECD⁶ countries it is small-to-medium sized enterprises (SMEs) that generate between 60 and 70% of employment and make the most significant contribution to economic growth in the globalized world. Many of these SMEs are constrained in their access to traditional banking or debt financing due to a lack of traditional security. The IP system is a precondition for the markets for technologies, innovations and creative activities that are often developed by SMEs. Young SMEs are also often linked to universities and research institutions, which are themselves also using IP assets to leverage their research and work with commercial partners.⁷

Why are IP rights valuable as commercial assets? The fundamental value of IP arises from its exclusivity. The law confers the right or ability of the IP owner to exclude others, assuring its uniqueness. This enables the owner the time to monetize

⁵Siebrasse (1997), https://www.researchgate.net/publication/237830835_A_Review_of_Secured_Lending_Theory, pp. 2–3.

⁶The Organization for Economic Cooperation and Development.

⁷An overview of business and government action is published by the International Chamber of Commerce (ICC) in its biennial publication. See <https://iccwbo.org/media-wall/news-speeches/icc-releases-2014-intellectual-property-roadmap>. Accessed 17 May 2017. This link provided contains the 2014 press release and has now been updated with the full text of the ICC IP Roadmap 2017. See ICC (2017), <https://cdn.iccwbo.org/content/uploads/sites/3/2014/11/icc-IProadmap-intellectual-property-roadmap-current-emerging-issues-business-policymakers.pdf>. Accessed 18 May 2017.

personal innovations and creations by the route that creates greatest corporate value without undue concern that third parties will copy them. IP rights also confer pricing power. The value of an IP right (or portfolio of IP rights) is basically the value of supra-normal profits earned from exploiting the innovation or creation, compared with what might be earned without the IP right. The commercialization of innovations and creations and the IP rights that protect them are therefore two different issues. For example, if a patent is declared invalid, the IP owner may still beat other competitors to market and thus earn revenue from the invention. Conversely, if that owner fails to develop the invention, a revenue stream can still be earned from the patent by licensing out to others the right of its use.⁸ In theory, young IP-rich SMEs are less likely to suffer margin erosion, and this should be central to a lender's valuation as a form of security.

For our purposes, the company law term SME refers to young enterprises involved in IP creation, whether with respect to innovation or the creative sector. We assume here that the young SME with IP assets adopts a private limited company legal structure in the relevant international jurisdiction. SMEs do not issue publicly tradable securities, making such enterprises reliant on credit from banks to grow their businesses. With quoted share offerings listed on a stock exchange and available to the public as well as to large private companies the value of intangible IP assets is recognized in their market value. However, for unquoted SMEs there is no comparable mechanism to measure and demonstrate how IP assets will create value for their business for use as security for bank loans.⁹

There are four reasons for the interest in enhancing young SME access to IP-backed debt finance.

First, there is the scale of commercial value dependency on intangibles and IP assets, which has often been recognized.¹⁰ A growing body of research shows rapid expansion of investment in intangible assets by companies in the United States (US), Japan and Europe, with significant impact on productivity. Data shows investment in IP assets is growing and continues to outstrip investment in tangible assets. In many countries, the proportion of 'off balance-sheet' assets to 'on-balance-sheet' assets (the price-to-book ratios of companies) has risen for decades. These figures signal the growing value business attaches to knowledge, innovation and creativity. Young SMEs in the technology and creative industry sectors are likely to be IP-rich. In terms of fundamental policy relating to secured debt finance, high-growth, young IP-rich companies typically do not possess suitable security on their corporate balance sheets for financing from a capital

⁸See Walmsley (2001).

⁹See Garrett (1995), p. 99.

¹⁰New figures published today (21 March 2014) show that UK business is building success through knowledge and creative assets. See UK Department for Business, Innovation and Skills and Viscount Younger of Leckie (2014), <https://www.gov.uk/government/news/uk-knowledge-investment-continues-to-grow>. Accessed 13 May 2017.

adequacy perspective (IP is a 100% risk-weighted asset).¹¹ Thus the corporate finance options for young IP-rich SMEs are limited and they remain largely dependent on bank lending to raise capital due to limited means of self-finance (e.g., savings, government grants etc.) and the high cost of equity finance. Debt finance is advantageous for SMEs as it is typically less expensive than other funding methods and does not involve diluting equity in the business. Operationally, it is relatively easy to implement. Yet, most lenders only rarely identify and consider IP assets in SME credit appraisal decisions, instead focusing their attention on the familiar: traditional tangible assets such as land and equipment.

Second, as early as 1979 it has been known that the smaller the borrower, the more likely security will be required. In other words, smaller riskier borrowers are more often required to provide security.¹² This is because security is traditionally regarded by lenders as a signaling device to indicate poor quality borrowers rather than good quality borrowers who are able to rely on their cash flow and income streams to repay loans. In terms of secured lending theory, this directly affects IP-rich SMEs in the innovation and creative sectors.

Third, following the global financial crisis which began in 2007,¹³ SME access to finance was formally recognized as an issue of pressing importance at the G20 summit held in 2009.¹⁴ Since that period, the ability and willingness of commercial banks to fund SMEs globally has generally declined despite government initiatives to increase lending. At the same time, a bank loan or commercial mortgage is the preferred method of finance.¹⁵

Fourth, young IP-rich SMEs are largely dependent on bank lending to raise capital as it does not involve diluting equity and control of decision-making within the business is retained by the directors.

¹¹Capital regulation requires that a sufficient fraction of a bank's investments or assets be funded with un-borrowed money. Because un-borrowed funds are obtained without any promise to make specific payments at particular times, having more equity enhances the bank's ability to absorb losses on its assets.

¹²Hester (1979), pp. 349–57. The pilot survey gathered information on 1072 business loans of \$10,000 or more made by sixty-two banks in 1972.

¹³See The run on the Rock Fifth Report of Session 2007–2008 House of Commons Treasury Committee (2008) Vol. 1, House of Commons London: The Stationer Office Ltd p. 4–20. Also known as a credit crunch, it is a decline in the general availability of loans (or credit) coupled with a tightening of the conditions required to obtain bank loans. A credit crunch is accompanied by a “flight to quality” by lenders, as they search for less risky investments, often at the expense of SMEs.

¹⁴See G20 (2009), <https://www.oecd.org/g20/summits/pittsburgh/publicationsdocuments/>. Accessed 13 May 2017.

¹⁵See Lomax and Davies (2013), <http://www.bmgresearch.co.uk/sme-journey-towards-accessing-external-finance/>. Accessed 13 May 2017. A Report by BMG Research commissioned by UK Department of Business and Innovation in p. 68 which found that for banks loans were preferred by 36% of SMEs, followed by a bank overdraft (23%) and loans/equity from friends and family (10%).

Against the dramatic rise of IP value as a percentage of corporate value is the setback from the contraction of the banking sector and the availability of financing for growth across the globe generally. Therefore, even though IP rights are corporate assets that drive technological 21st century innovation and the creative industry, IP-backed debt finance is underdeveloped in virtually every country in the world due to the understandable risk-aversion of many banks in dealing with intangible IP assets which they find difficult to identify, value and register their security interest. Secured creditors enjoy a priority status in insolvency (bankruptcy) situations and are repaid ahead of unsecured creditors and company shareholders. Nevertheless, the use of intangible IP assets as security for loans has existed for over a century and needs to grow and eventually become commonplace if young SMEs are to thrive in the post-recession economy.

The advantage of IP rights as corporate assets is that in addition to creating a new asset which can be used as a source of security for loans, IP assets have the potential to create a royalty revenue stream, to bolster financial statements and to provide a shield against aggressive competitors. However, this requires a largely upfront financial investment by the owner. IP-savvy young SMEs accumulate as many IP rights as possible with a view to maintaining their discretion in choosing the most suitable commercialization strategy. When funding is limited, young SMEs focus on acquiring those IP rights that are most likely to generate a financial return. Imperfect access to debt finance funding has a comparatively greater negative impact on young SMEs at the beginning of the business life cycle. This is because entrepreneurs and young SMEs frequently lack the internal financial resources to engage in the IP rights registration process that supports commercialization, compared with larger firms who have more finance and security options.¹⁶ Lenders prefer to deal with registered granted IP rights because they are legally enforceable against infringers, more liquid and therefore seen as more valuable. There are also gaps in the level of finance and IP law knowledge among many young SMEs and lenders.¹⁷ There is a pressing need to facilitate the use of IP as the underlying asset in a loan transaction to support young SMEs worldwide. Poor—or non-existent—access to financing is the main barrier to achieving growth aspiration plans that underpin nation states' economic goals.¹⁸ This chapter proceeds as follows: the debt versus equity debate is examined in Sect. 1 and provides a theoretical framework for the discussion of the international initiatives to facilitate IP-backed debt finance in Sects. 2, 4 and 5. Following the critical analysis of the global initiatives, Sect. 6 introduces the concept of 'systemic change' and a new conceptual framework for IP finance, with a view to informing policy to support the agile development of globally enhanced SME access to IP finance.

¹⁶See European Commission (2012), p. 18, <https://www.iprhelpdesk.eu/node/867>. Accessed 13 May 2017.

¹⁷See Gower (2006), p. 3, <https://www.gov.uk/government/publications/gowers-review-of-intellectual-property>. Accessed 13 May 2017.

¹⁸Federation of Small Business (2012), http://www.fsb.org.uk/docs/default-source/Publications/reports/fsb_2012_access_to_finance.pdf?sfvrsn=1. Accessed 17 May 2017.

1.1 IP Finance and SMEs: Debt Versus Equity

IP-backed debt finance simply involves using a portfolio of IP rights as security (collateral)¹⁹ for a loan.²⁰ However, most lenders rarely consider IP assets in SME credit appraisal decisions, instead focusing their attention on the familiar: namely, traditional tangible assets. However, the duration of the IP rights, some of which have the potential to exist indefinitely (registered trademarks and confidential information) allowing lenders to forecast revenue and possibly enabling the young SME to generate high-value income through licensing, thus reducing cost/income ratios. Debt finance needs to become a viable alternative to venture capital (VC) and private equity finance, the availability of which has also decreased over the past decade.

1.2 Equity Finance

In terms of access to finance, economies with robust IP regimes are more likely to attract venture capital and private equity funding.²¹ IP assets are a resource with great appeal for venture capitalists; however, a variety of finance options is needed by young IP-rich SMEs, given the decline in VC investment since the onset of the global financial crisis in 2008. Presently there are fewer markets for initial public offerings (IPOs) as companies stay private for longer periods of time. Further, in many jurisdictions, especially in Asia, South America, Africa and the Middle East, the IPO market is small and/or immature. For example, even in a highly developed nation such as Japan, the amount of investment by Japanese VC is very small compared with that of North America and Europe.

Unsurprisingly, companies increasingly seek financing from outside the VC arena. VC finance is limited by the fact that it primarily serves the capitalist interests of VCs over the public's interest in supporting innovation and creative activity. In other words, what VCs choose to invest in may not take into account the public interest and ultimately may limit choice in the innovation ecosystem. It is suggested that if governments would take a more active role in shaping the activities of lenders to enhance SME access to IP-backed debt finance, this would reduce the need for VC finance and increase the likelihood of young SME business activities

¹⁹Collateral is the American term for "security".

²⁰In many OECD countries, investment in intangible assets is growing rapidly. In some cases, this investment matches or exceeds investment in traditional capital. Intensified global competition, ICTs, new business models, and the growing importance of the services sector have all amplified the importance of intangible assets to firms, industries and national economies.

²¹Global Intellectual Property Center of US Chamber of Commerce (2016), http://www.theglobalipcenter.com/wp-content/themes/gipc/map-index/assets/pdf/2016/GIPC_Index_2016_Final.pdf. Accessed 13 May 2017.

aligning with national and international innovation policy. Improving access to additional public and private capital is where the government, IP debt finance, secured transactions, bankruptcy and insolvency law all have roles to play. In addition, sharing valuable VC experience as to how to deal with IP assets and strategy with lenders and other e-finance platforms will be a key skill in the modern innovation ecosystem.

1.3 IP-Backed Debt Finance and Information Asymmetry

There are various types of IP debt-financing practice depending on the type of IP asset involved. For example, lending practices may differ between the use of patents to secure pharmaceutical borrowing, a copyright for a movie or software financing or trademark inventory financing. Regardless of the type of IP asset offered as security, at its core, the key objectives of IP financing are: (1) to allow IP owners to use their IP rights as security for credit to the extent permitted under IP law; and (2) to allow secured creditors to obtain a security interest in an IP right, determine its priority and enforce it within the limits of IP law.

In credit decisions involving young SMEs, lenders use a variety of information sources in order to arrive at a decision on whether to lend. This may include corporate regulator records as well as credit history, automated tools and scoring systems. However, according to Richard Holden, Head of Manufacturing at Lloyds Banking Group in London, the current position within the SME debt finance market is that lenders initially only require the SME to provide a breakdown of its assets and liabilities via its traditional financial statements, the balance sheet and a profit and loss statement. He advises that:

At present, these seldom if ever include intangibles or IP; they don't get offered or asked for —they are just not on the agenda. As a result, it is unlikely in most cases, that the credit decision process considers IP to any degree. Paying much attention to IP at the moment would be a big leap in any event, but at least when it comes to understanding a company's overall position, it may provide comfort between doing something or not. It doesn't necessarily follow even at that point that lending will be increased or be directly assigned to IP, but it might make the difference between lending and not lending.²²

In other words, in the UK, lenders are not 'IP information demanders'. The fact that traditional lending practice does not include non-financial performance adversely impacts knowledge-based young IP-rich SMEs. Those that wish to raise capital in the debt market are particularly affected (Footnote 204 in chapter "IP and Debt Finance: Cross-Border Considerations"). Holden opines that improving the quality of IP information available to lenders would probably involve a nonstandard form or process with custom-made documentation, at least initially. This would have a

²²See Brassell and King (2013), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017.

cost attached to it, which the bank would have to pass on in some way, unless standardized approaches were available.²³ Lowering the lender's costs to obtaining IP asset information (transaction costs) decreases the cost of credit. In contrast, older companies with a corporate reporting history are less likely to secure loans²⁴ and larger and longer term loans generally indicate that borrowers are safer or that there are economies of scale.

There are a number of actors with different roles in the IP-debt finance transaction involving a young SME. Some of these are represented in Table 1 below. An IP-debt finance transaction encompasses the young IP-rich SME or its professional advisors dealing with a lender to leverage its IP assets to raise money for business purposes (Column 1). However, many finance solutions for young SMEs end up being hybrids, combining equity and debt finance, from traditional providers such as venture capitalists, business angels and banks, as well as alternative providers such as crowd funding, with grant aid (Column 2). Exploitation relates to the generation of income through the sale of products and services in which IP assets are embedded or via the licensing of IP (Column 3).

In summary, according to Edwards, a confluence of factors has combined to set the stage for the need to develop access to IP-backed debt finance:

- the increase in technological innovation and creative activity and the ensuing growth in corporate IP assets;
- an environment of restricted capital markets, especially in the venture capital and private equity arenas; and
- the growing realization that IP represents a strategic advantage that, when viewed as financial assets, can greatly impact market value.²⁵

Fortunately, in a variety of countries around the world, a number of interesting developments have emerged, lifting the awareness of IP-backed debt finance, and perhaps even more importantly, its provocative potential.

The remainder of this chapter draws together the fragmented contributions at the international, national and private levels in an effort to tackle how to increase young SME access to IP-debt finance. A comparative functionality approach is relevant here because functionalism is an orientation towards the practical application of aspects of the finance practice.²⁶ The aim is to consolidate the body of knowledge and explore the gradual advances being made with respect to this exceptional method of financing.

²³See Brassell and King (2013), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017.

²⁴Leeth and David (1983), pp. 371–387.

²⁵See Edwards (2001).

²⁶See Brand (2006), p. 409.

Table 1 Actors in IP debt finance

1. Innovation	2. IP-debt finance transaction	3. Exploitation
The SME (corporate person) SME creators/inventors, entrepreneurs, R&D (natural persons) Company directors Professional advisors (accounting, legal and IP) Statutory IP rights registers (e.g., state intellectual property office)	Grant funders (public government or third sector money) Equity funders (private money) Debt finance (lenders) Crowd-funding and e-platforms Statutory registers to record the security (corporate and IP) Proceedings and court judgments within the formal legal system (due diligence)	SME Sales and distribution channels, licensees, retailers and publishers etc. Business partners Competitors Customers/clients/the public Statutory IP registers to record licence transactions

2 International Economic Research to Underpin IP Finance Policy Developments

At the international level, the global economic crisis has shone a light on how policies may assist in the accumulation of these types of IP assets as a source of growth. In addition, many emerging economies are pursuing new policies to develop the IP assets necessary to succeed in high value-added economic activities.

2.1 *Office for Economic Cooperation and Development (OECD) Research*

OECD research demonstrates that young SMEs play a central role in creating jobs and enhancing growth and innovation²⁷ and that a successful finance ecosystem needs to develop SME access to IP-debt financing to increase the supply of available credit. A further OECD study concluded that targeting resources to IP-rich young SMEs is important as those resources are critical to implementing new ideas and bringing innovation to market.²⁸

The empirical economic studies discussed above are designed to support evidence-based policy making. The key issue however for IP finance is to increase a lender's risk tolerance for using IP assets as security. Two international organizations in particular, the World Intellectual Property Organization (WIPO) and the UN Commission on International Trade (UNCITRAL) have taken the lead in

²⁷See Criscuolo et al. (2014), <http://cep.lse.ac.uk/pubs/download/dp1274.pdf>. Accessed 13 May 2017.

²⁸See Andres et al. (2014), http://www.oecd-ilibrary.org/economics/do-resources-flow-to-patenting-firms_5jz2lpmk0gs6-en. Accessed 13 May 2017.

driving the agenda for analyzing the barriers that need to be overcome if IP-backed debt finance is to thrive in the future, rather than be left on the margin.

2.2 World Intellectual Property Organization (WIPO) and United Nations Commission on International Trade (UNCITRAL) Initiatives

WIPO's involvement in IP-backed financing is to raise awareness among its member states' IP offices, and the wider IP community of the current international policy development. WIPO's Director-General, Francis Gurry, has identified what he believes to be the principal reasons for the considerable difficulty in developing IP-backed debt financing. These are:

1. the lack of a clear connection between the security and the underlying asset; and
2. the complexity and lack of transparency in the IP system that results in distrust of the intangible economy.²⁹

Since 2004 WIPO has cooperated with UNCITRAL to ensure that the views of the IP community are taken into consideration in policy development on the issue,³⁰ participating in deliberations to develop the *Legislative Guide on Secured Transactions* (LGST) to assist states in modernising their secured transactions laws and enabling effective access to finance. If implemented, a general credit registration system (such as that envisaged by the LGST) will provide legal certainty for lenders, by giving transparency as regards the debtor's credit structure, and giving visibility to secured transactions.

Next, in 2005 WIPO recognized that current international accounting standards (IAS) are ill-equipped to address the IP dimension of business, and it issued the following statement:

Clearly, the various challenges associated with determining the value of internally held IP, paired with the inherent volatility associated with the value of some forms of IP, can be cited as major reasons why accounting has been reluctant to report on internally generated IP, which is seen as too subjective and risky. Furthermore, accounting has always been reluctant to anticipate future gains, overstate the value of assets or include assets on the balance sheet whose value is more volatile.³¹

WIPO held its inaugural 'IP Financing' meeting shortly afterwards in 2008, with the WIPO-Argentina Conference entitled "Intellectual Readiness: The Role of

²⁹See Tuncak (2009), <http://www.ip.finance/2009/03/wipo-information-meeting-on-ip.html>. Accessed 13 May 2017.

³⁰See WIPO (2009), http://www.wipo.int/pressroom/en/articles/2009/article_0003.html. Accessed 13 May 2017.

³¹See WIPO (2015), <http://www.wipo.int/sme>. Accessed 13 May 2017.

Intangibles as a Tool for Raising Finance”.³² This was followed by a WIPO Information Meeting on ‘IP Financing’ in 2009 in Geneva, Switzerland. Theme 5 focused on ‘Financial Institutions’ Perspective of IP Financing’. Ms. Megan Deane, Deputy Managing Director of the national Export-Import Bank (E-IB)³³ of Jamaica gave a presentation entitled, ‘Taking IP to the Bank’.³⁴ She stated that the 2010 Vision for E-IB was to increase the bank’s tolerance for credit risk. In addition, Ms. Helena Tenoria Veiga de Almeida, Head of Policy Design Department, Intangible Assets Evaluation Program of the Brazilian Development Bank (BNDES) discussed IP asset valuation for finance purposes. BNDES uses an internally developed methodology for intangibles to evaluate 56 quantitative and qualitative and patent information indicators to derive an intangible capital (IC) rating.³⁵

Theme 6 dealt with international policy development for IP financing.³⁶ Mr. Spiros Bazina, Senior Legal Secretary of UNCITRAL, and Working Group VI³⁷ explained the relationship between IP, secured transactions law and the interaction between the LGST and the IP Annex. Briefly, the LGST is not a restatement of current law, but rather a guide to reform of secured transactions law with the economic goal of facilitating the use of both movable and intangible property as security to facilitate increased access to credit at lower cost.

On 6 December 2010, UNCITRAL adopted the *Supplement on Security Rights in Intellectual Property (hereafter the IP Supplement)* in order to include IP in the general security right system under the LGST. The *IP Supplement* aims to address the problem of insufficient coordination between secured transactions and IP law by facilitating the extension of credit at a lower cost while deferring to IP law to the extent there is a conflict between the two bodies of law—in particular, without interfering with fundamental policies of IP law.³⁸

In the analysis, the *IP Supplement* largely concentrates on providing guidelines for the development of law at a national level. There is no guarantee that all states will make the same conflict-of-laws rules. What is still needed to facilitate IP-backed debt finance is a focus on designing a substantive secured transactions

³²See details of WIPO’s IP Finance related meetings at http://www.wipo.int/meetings/en/details.jsp?meeting_id=16342. Accessed 13 May 2017.

³³A bank wholly-owned by the government of Jamaica.

³⁴See Deane (2009), http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=118034. Accessed 13 May 2017.

³⁵The author has been unable to locate any further information in English on the success or otherwise of BNDES IP-backed debt financing and it certainly would be of interest to follow up this Brazilian banking IP finance initiative.

³⁶See WIPO (2008b), http://www.wipo.int/wipo_magazine/en/2008/05/article_0001.html. Accessed 13 May 2017.

³⁷See Bazinas (2009), http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=118036. Accessed 13 May 2017.

³⁸UNCITRAL (2010), http://www.uncitral.org/uncitral/en/uncitral_texts/security/ip-supplement.html. Accessed 13 May 2017.

law at the private international level.³⁹ The publication of the *IP Supplement* has led to vigorous debates on the legal policy of promoting IP finance on both levels, which is a positive development. If countries determine to promote IP finance, it will be important for policy makers to study the current situation whereby IP financing methods are in fact infrequently used at the national level, and to create a substantive secured transactions law that is suitable to the characteristics of the IP law framework in that state. In this process, the LGST and the *IP Supplement* will be helpful references for reform. Reform to secured transactions law is a key pillar in the effort to support the development of IP finance.

Since 2010, both UNICITRAL and WIPO have continued to play vital roles as facilitators for the international debate on IP finance, signaling the credibility and need for additional research. In terms of specific state-sponsored research into IP finance policy, the contribution of the UK and Europe is gaining momentum.

3 IP Finance Developments in the UK and Europe

Important and meaningful recent developments in IP finance have taken place in the UK and Europe, in particular with the *Banking on IP? Report in 2013*⁴⁰ and the *Final Report from the Expert Group on Intellectual Property Valuation (IP Valuation Report)* in 2014. These research initiatives are providing the impetus to consolidate knowledge with respect to this under-exploited yet promising financing method.

3.1 The United Kingdom (UK)

The UK has a highly advanced and sophisticated IP environment.⁴¹ The first notable UK initiative for IP finance took place in 2006 when the UKIPO jointly organized a conference on “Patents: realising and securing value” together with the European Patent Office (EPO) and the Organization for Economic Cooperation and Development (OECD). This high-level event was aimed at raising awareness of the crucial role of intellectual capital (IC) in the knowledge economy.⁴²

³⁹Sato (2013), https://www.iip.or.jp/e/e_summary/pdf/detail2012/e24_18.pdf. Accessed 13 May 2017.

⁴⁰Brassell and King (2013), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017.

⁴¹Global Intellectual Property Center of US Chamber of Commerce (2016), p. 73, http://www.theglobalipcenter.com/wp-content/uploads/2017/04/GIPC_Index_Report_2016.pdf. Accessed 13 May 2017.

⁴²EPO, the OECD, and the UK Patent Office (2006), <http://www.prnewswire.co.uk/news-releases/patents-realising-and-securing-value—an-international-conference-in-london-154779345.html>. Accessed 13 May 2017.

In 2008, the UKIPO partnered with the Austrian and Hungarian Patent Offices and the National Board of Patents and Registration of Finland to hold four international symposiums on “IP Valuation in Business”, the primary aim of which was to raise awareness of IP valuation issues and increase dialogue among stakeholders. Further interest in UK IP finance issues has been led by Professor Jeremy Phillips,⁴³ founder of the weblog *IP finance* in January 2008 whose webpage banner declares:

...Where money issues meet IP rights. This weblog looks at financial issues for intellectual property rights: securitization and collateral, IP valuation for acquisition and balance sheet purposes, tax and R&D breaks, film and product finance, calculating quantum of damages —anything that happens where IP meets money.⁴⁴

The *IP finance* blog is an offshoot of Professor Phillips’ earlier blog the *IPKat*,⁴⁵ which began in June 2003 and covers IP issues generally, from a UK and European perspective. The *IPKat* team organized the first UK IP finance conference in London on 15 October 2009. A second conference, *IP and Finance 2010: exploring and explaining the financial dimensions of IPRs*, soon followed which shared the knowledge of speakers from a range of disciplines to identify the complex issues arising when IP and finance interact.

The UKIPO commissioned the comprehensive *Banking on IP? Report*⁴⁶ published in late 2013 which catalogued the challenges facing IP-backed debt financing, making recommendations as to how these obstacles might be surmounted. Speaking at the Alliance for IP Conference in London on 17 October 2013, the then UK Business Secretary Vince Cable said:

SMEs are the lifeblood of the economy. Most of our successful creative businesses are SMEs and we know that IP represents a big part of their assets and growth potential. But too often, through risk aversion or banks’ conservative lending practices linked to property as security, IP is not catered to by traditional bank lending. Intellectual property is too important an asset to be undervalued by banks who are the main source of finance. That is why I commissioned a report to explore how we can improve SMEs’ access to capital. We will look carefully at its recommendations in order to better support this country’s creators and IP-rich businesses.⁴⁷

⁴³Professor Phillips is an IP consultant for commercial law firm, Olswang and editor of the *European Trade Mark Reports* and the *Journal of Intellectual Property Law and Practice* and formerly Research Director of the UK’s Intellectual Property Institute.

⁴⁴See <http://ipfinance.blogspot.co.uk/>. Accessed 13 May 2017.

⁴⁵See <http://www.ipkat.com/>. Accessed 13 May 2017.

⁴⁶European Commission (2014), https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017.

⁴⁷Department for Business, Innovation & Skills, Intellectual Property Office and Cable V (2013), <https://www.gov.uk/government/news/plans-unveiled-to-support-ip-rich-businesses-get-funding>. Accessed 14 May 2017.

The *Banking on IP?* report broadly discusses SMEs, IP awareness, IP value and accounting rules, UK debt and equity finance and policy initiatives, Clydesdale Bank's Growth Fund, liquidity and recording security interests. The key findings for the purpose of this chapter are: (1) IP and intangibles must be identified during the financing process; (2) IP value needs to be taken into account; and (3) lenders need additional guidance by way of legal templates and a resource toolkit.⁴⁸ The authors state:

...If IP and intangibles are to be given any consideration within credit decision-making, tools to identify and describe the actual assets (not merely evidence of expenditure) need to be embedded within the lending process. Businesses must use them, and lenders must understand and take note of them. This step will have the wider benefit of boosting IP awareness amongst the business community as a whole and will establish base data for the possible future use of IP as "full" security. The first steps are to provide a means for companies to identify the assets they own and to build information on IP and intangibles into the templates companies use when presenting information to prospective funders.⁴⁹

Following publication of *Banking on IP?*, the UKIPO convened a series of roundtable discussions with a multi-disciplinary group comprising of representatives from the financial services sector, including banks, equity investors and insurers, from the business advisory community, including the IP profession, lawyers, accountants and general commercial advisers, and from a number of SMEs. On 31 March 2014, the UK government formally responded to the *Banking on IP* report promising to promote a greater understanding of IP within businesses seeking finance and the financial sector, and to create systems to give lenders confidence in assessing the value of IP and the risks involved in lending using IP as security.⁵⁰ The UKIPO stated:

...In 2014/15 the IPO will therefore focus attention on improving the ability of IP-rich businesses to secure access to growth finance: by building understanding of IP in the business and the financial services communities, by enabling a more productive dialogue between businesses and lenders, and by building greater confidence in the value of IP assets as collateral.⁵¹

⁴⁸Brassell and King (2013), p. 216, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017.

⁴⁹See Brassell and King (2013), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017.

⁵⁰UK Intellectual Property Office (2014), <https://www.gov.uk/government/publications/banking-on-ip-an-active-response>. Accessed 14 May 2017.

⁵¹UK Intellectual Property Office (2014), p. 20, <https://www.gov.uk/government/publications/banking-on-ip-an-active-response>. Accessed 14 May 2017.

The UKIPO published *Banking on IP: An Active Response* confirming that, ‘early action must focus on raising awareness and stimulating an appetite for change within both business and the financial services community’.⁵² The UKIPO intends to develop a series of real life case studies showing how these businesses have, through their IP management, secured finance and are working with the British Bankers’ Association (BBA) and its Business Finance Roundtable to create an awareness campaign.⁵³ The UK is pressing ahead with its IP finance agenda.

3.2 The European Union (EU)

In 2014, the *Final Report from the Expert Group on Intellectual Property Valuation (IP Valuation Report)* was published.⁵⁴ The European Commission appointed a multi-disciplinary panel of experts to consider how IP valuation plays a part in innovation policy and where bottlenecks occur. This report investigated European best practices in IP valuation as performed by financial institutions that provide capital to SMEs, including examples relating to debt-financing. The panel noted a significant difference in the approach to lending to SMEs compared with large companies with strong trading histories and further, financial institutions interviewed expressed the view that IP is usually too risky to be used as security for traditional commercial loans.⁵⁵ The Final Report explored the inadequacy of IAS38 intangibles and recommended the filing of a “management report” together with a company’s annual report, giving detailed information about IP value in order to improve publicly available information on intangibles generally.⁵⁶

The crux of the problem is that if internally generated ‘off balance sheet’ corporate IP assets are inadequately financially recorded for modern purposes, the result is a lack of financial transparency. From the lender’s point of view, this ‘invisibility’ creates a key problem in that nothing exists on the financial statements (documents that they are familiar with) to quickly tell them how to value the firm’s internally developed IP assets and their potential for use as security (collateral).

⁵²UK Intellectual Property Office (2014), p. 4, <https://www.gov.uk/government/publications/banking-on-ip-an-active-response>. Accessed 14 May 2017.

⁵³UK Intellectual Property Office (2014), <https://www.gov.uk/government/publications/banking-on-ip-an-active-response>. Accessed 14 May 2017.

⁵⁴European Commission (2014), https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017.

⁵⁵European Commission (2014), p. 6, https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017.

⁵⁶European Commission (2014), https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017.

The undesirable level of uncertainty from the lender's perspective is a formidable barrier which prevents appropriately informed credit appraisal decisions from being made. In other words, financing the young SME is adversely affected. The weaknesses inherent in the financial reporting of IP asset value was also confirmed in the *IP Valuation Report* (2014) which states:

...There are limitations on when and how it is possible to place the value of IP assets on the balance sheet of the company. The complexity of IP from an accounting perspective leads to problems in its reporting, which may result in the vulnerability of firms which base most of their performance on IP.⁵⁷

IP assets are often worth much more than their historic financial value, for any number of commercially strategic reasons. If their value is limited in traditional financial statements, then the young SMEs themselves, as well as the lenders, may not be aware of their role and what they can offer in terms of business strategy and performance.

Demand for relevant, accurate and timely information regarding young SMEs' intangible IP assets is needed. Limited access to VC finance, IP-backed debt finance, public government grants and self-finance have resulted in a funding gap that hits young SMEs particularly hard. Lenders are unable to value and use as security IP assets that are not made known (disclosed) either quantitatively in traditional financial reports or qualitatively in narrative corporate reports.

The author hypothesizes that increased voluntary corporate disclosure relating to IP assets by young SMEs should assist to facilitate credit appraisal and potentially favorable lending decisions, reduce transaction costs and support annual IP asset monitoring by banks. The importance of IP finance and using IP assets as security should in theory lead to young SMEs being offered better credit terms than unsecured credit, opening up an existing but underused path to liquidity. Lowering legal risk, through a higher level of borrower disclosure of relevant, accurate and timely IP asset information and the business strategy for creating value from those corporate assets should enable lenders to better assess and quantify risk, thereby lowering the cost of credit.

The IP finance research and literature taking place in the UK and the EU show a high level of momentum in the region to tackle this important commercial problem. The UKIPO-sponsored *Banking on IP?* (2013)⁵⁸ report and the EU-sponsored *Final Report from the Expert Group on IP Valuation* (2014)⁵⁹ indicate that the EU seeks to achieve a better understanding of the interplay between IP rights and how their value as financial assets is understood.

⁵⁷European Commission (2014), p. 6, https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017.

⁵⁸Brassell and King (2013), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017.

⁵⁹European Commission (2014), https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017.

4 The United States Patent Quality Initiative (PQI)⁶⁰

The US is a key global player, has one of the largest economies in the world and is also steadily advancing the IP finance agenda. In October 2014 the Clearing House,⁶¹ a US banking industry group representing more than 20 US and international financial institutions, formed the PQI, a project aimed at eliminating inferior patents through better prior art searching, research and filing thereby enhancing patent quality as a form of intangible property capable of being used as security.⁶² According to Lloyd, the initiative reflects the increased sophistication of financial institutions with respect to IP assets. The new term ‘fin-tech’ covers the software programs and other technology used to enable banking and financial services that are disrupting sectors such as mobile payments and money transfers. As financial institutions begin to realize the value of their own e-commerce patent portfolios, they are creating internal IP teams to more effectively manage their patent strategies.⁶³ The premise is that low quality patents are subject to more litigation resulting in legal uncertainty which reduces patent value. Although this initiative is limited to one type of IP right—patents—higher quality patents will enhance legal certainty as to the validity and thus the value of patents and their potential to secure loan transactions.

5 Government IP-Backed Debt Finance Initiatives in Asia to Stimulate Economic Growth and Address the Young SME Funding Gap

5.1 Singapore’s ‘IP Financing Scheme’

Asia is currently setting the pace in IP-backed lending and governments have adjusted their mind-sets to profit from the changing environment. At the forefront of

⁶⁰See www.patentqualityinitiative.com.

⁶¹The Clearing House is the oldest banking association in the US and is owned by the world’s biggest commercial banks, who hold more than half of all US deposits. It is self-described nonpartisan advocacy body representing the interests of its owners on significant banking issues. The Clearing House Payments Company L.L.C. provides payment, clearing and settlement services to its member banks and other financial institutions, clearing just under \$2 trillion USD daily. See <https://www.theclearinghouse.org/>. Accessed 14 May 2017.

⁶²See Oblack (2014), http://www.patentqualityinitiative.com/news/press%20releases/2014_oct%2015_pqi%20launch. Accessed 14 May 2017.

⁶³See Lloyd (2014), <http://www.iam-magazine.com/blog/detail.aspx?g=972D0D5D-D116-42FD-945D-82AC28C33B3A>. Accessed 14 May 2017.

such initiatives is Singapore. In April 2014 the IP Office of Singapore (IPOS)⁶⁴ launched a substantial S\$100 million 'IP Financing Scheme' designed to support local SMEs to use their IP as security for banks loans.⁶⁵ To be eligible, applicants must be incorporated and have IP or granted registered rights such as trademarks, design or patents to use as security. The scheme has three steps. First, with its granted IP right(s), an applicant can approach a participating financial institution for a preliminary assessment. The participating banks are: DBS Bank Ltd⁶⁶; Overseas-Chinese Banking Corp Ltd⁶⁷; and the United Overseas Bank Ltd.⁶⁸ Next, a panel of IPOS-appointed valuers assess the applicant's IP portfolio using standard guidelines to provide lenders with a basis on which to determine the amount of funds to be advanced. The development of a national valuation model is a noteworthy aspect of the scheme which could lead to an accepted valuation methodology for the future. Finally, the applicant submits a formal application to the participating lender.⁶⁹ Under the terms of the loan agreement, the interest rate for repaying the loan is not fixed and depends on the granted patent portfolio valuation.⁷⁰ The Singapore government will subsidize the valuation but this is capped at 50% of the IP valuation cost, or 2% of the value of the IP, whichever is lower.⁷¹ If the borrower defaults, the loan will be partially underwritten by the Singapore government, thus the liquidity of the patent assets on default is minimized.⁷²

The IPOS IP Financing Scheme is contributing to the evolution of IP-backed debt finance with the Singaporean government investing a substantial sum in creating an environment in which IP-backed debt finance has the potential to thrive. If the scheme proves to be a credible model, it could become the preferred template within the international IP community. Singapore ranks first in Asia, and second globally, for IP protection according to the World Economic Forum's Global Competitiveness Report 2014–2015.⁷³ The country's strong IP regime together

⁶⁴IPOS is a statutory board under the Ministry of Law that advises and administers the IP regime, promotes its usage and builds expertise to facilitate the development of Singapore's IP eco-system. See www.ipos.gov.sg. Accessed 14 May 2017.

⁶⁵See IPOS (2014b), <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/272/category/Press%20Releases/parentId/80/year/2014/Default.aspx>. Accessed 14 May 2017.

⁶⁶See www.dbs.com.sg.

⁶⁷See www.ocbc.com.sg.

⁶⁸See www.uob.com.sg.

⁶⁹See IPOS (2014a), <http://www.ipos.gov.sg/IPforYou/IPforBusinesses/IPFinancingScheme.aspx>. Accessed 14 May 2017.

⁷⁰See Collopy and Chun (2014), <http://www.managingip.com/Article/3362420/Singapore-IP-financing-scheme-launched.html>. Accessed 14 May 2017.

⁷¹See Collopy and Chun (2014), <http://www.managingip.com/Article/3362420/Singapore-IP-financing-scheme-launched.html>. Accessed 14 May 2017.

⁷²See Leung (2014), <http://www.managingip.com/Article/3382687/From-idea-to-asset-Singapore-IP-financing-scheme.html>. Accessed 14 May 2017.

⁷³See IPOS (2014c), <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/249/category/Press%20Releases/parentId/80/year/2013/Default.aspx>. Accessed 14 May 2017.

with its well-established and diverse finance sector and support from major financial institutions adds to its credibility.

5.2 *The People's Republic of China (PRC) IP Pledge Financing Program*

Also of interest, but less influential, is the People's Republic of China's (PRC) State IP Office (SIPO) patent-backed debt finance initiatives.⁷⁴ In terms of a functional comparative analysis of IP finance related issues, a foreign system should always be seen from the inside and within a socio-cultural context.⁷⁵ The PRC's IP regime is just over 30 years old, yet its government has been extremely proactive in raising awareness to ensure that domestic enterprises understand the future value-creating potential of IP.⁷⁶ In 2004, SIPO began to design the nation's IP strategy which evolved from its membership in the World Trade Organization. In 2006, the landmark policy, *The Guidelines on National Medium and Long-Term Program for Science and Technology Development (2006–2020)* was issued.⁷⁷ A pilot "IP pledge financing" program followed in 2008. According to *China IP News*, only 6 years later in 2014, SIPO reported that Chinese companies had secured over £6 billion GBP in IP-backed loans since the program launched. For example, in 2013, Chinese companies had apparently secured over £2.4 billion GBP (25.4 billion yuan) of credit against patent assets.⁷⁸ Unfortunately, SIPO does not appear to have published information about how the scheme works. From the standpoint of Western lenders and borrowers, it is difficult to determine how Chinese financial institutions carry out credit appraisals leading to positive decisions to grant patent-backed loans. However, the fact that the Chinese government has more direct control and input into commercial bank lending policy and capital adequacy requirements enables it to vigorously and potently implement its strategic goal of increasing IP-backed lending. In 2012, China's Ministry of Finance issued the new "Measures for the Administration of Special Funds for Subsidizing Foreign Patent Applications". The regulation outlines policies for PRC citizens and entities that file patent applications abroad.⁷⁹

⁷⁴See IP China News (2014), <http://www.chinaipr.gov.cn/article/nocategory/201403/1801673.html>. Accessed 14 May 2017.

⁷⁵See Palmer (2004), pp. 2–5.

⁷⁶See Shao and Feng (2014).

⁷⁷See Shao and Feng (2014), pp. 30–31.

⁷⁸See Cohen (2012), <http://chinaipr.com/2012/06/>. Accessed 14 May 2017.

⁷⁹Wild (2014), <http://www.iam-media.com/blog/Detail.aspx?g=481b76b6-637f-427f-b8d6-78d06cece504>. Accessed 14 May 2017.

Further, in 2014 the largest-ever IP-backed debt finance loan emerged in the PRC. A trade publication, *China Paper*, reported⁸⁰ that Quanlin Paper, a Shandong province-based company, secured a loan of approximately £78 million GBP (RMB 7.9 billion) against a small portfolio of 110 patent and 34 trademark rights from a lending consortium led by the China Development Bank (CDB).⁸¹ Although the quality of Quanlin's patent and trademark portfolio is indeterminate, the scale of the loan speaks for itself, and for that reason alone, is worthy of attention. The loan was reportedly recorded on 21 February on SIPO's IP asset register. The CDB is a PRC government-owned financial institution created in 1994 by the Policy Banks Law of 1994.⁸² At its head is a cabinet minister level Governor, under the direction of the State Council. It is one of three policy-making banks in the PRC primarily responsible for raising finance for large infrastructure projects. The CDB was involved in financing the Three Gorges Dam and the Shanghai Pudong International Airport and is described as 'the engine that powers the national government's economic development policies'.⁸³ Most of Quanlin Paper's small portfolio of IP rights is limited to China.⁸⁴ The portfolio was valued at £600 million GBP (RMB 6 billion)⁸⁵ but details as to the valuation process for credit purposes has not been officially reported to date. This would assist to confirm if the sale of Quanlin's portfolio would enable the CDB to recoup its loan in the event it defaults. Whether the PRC credit appraisal methodology is capable of being adopted by Western economies, and thus is a compelling and credible case for change, is certainly debatable and an area for future research. In a public statement, Jiang Lurong, general manager of the Shandong branch of Bank of Communications (part of the consortium that syndicated the loan) said:

...IP seems intangible, but it reflects the ability of value creation and sustainable operation of enterprises. Banking risk is not increased, but may be able to get a hold of high-quality customers early and improve the structure/makeup of the client base.⁸⁶

Debts issued by the CDB owned by local banks are treated as "risk-free assets". Under the proposed PRC's capital adequacy rules for intangibles, they receive the same treatment as government bonds and the CDB is effectively insured by the

⁸⁰The original report was in Mandarin and was translated into English.

⁸¹See IPOS (2014c), <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/249/category/Press%20Releases/parentId/80/year/2013/Default.aspx>. Accessed 14 May 2017.

⁸²See <http://www.cdb.com.cn/web/> (no English translation).

⁸³See Forsythe and Sanderson (2011), <https://www.bloomberg.com/markets/markets-magazine>. Accessed 14 May 2017.

⁸⁴See IAM Magazine (2014), pp. 5–6, www.iam-media.com/ctredir.ashx?g=cc6edf40-3f31-4157-b1aa-0cb886775091. Accessed 14 May 2017.

⁸⁵See IPOS (2014c), <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/249/category/Press%20Releases/parentId/80/year/2013/Default.aspx>. Accessed 14 May 2017.

⁸⁶See IPOS (2014c), <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/249/category/Press%20Releases/parentId/80/year/2013/Default.aspx>. Accessed 14 May 2017.

government. In contrast, under Basel III,⁸⁷ applicable to the UK and the EU, intangibles are rated as more risky types of assets requiring banks to hold more capital under the capital adequacy regulations which is a deterrent to IP-backed lending.⁸⁸ Intangibles are treated as lower-quality security, and intangible assets are not usually counted toward the loan's security because they are considered too difficult to value. The amount of funding Quanlin secured against its IP portfolio signals the substantial support for IP-backed debt finance initiatives in the PRC. Empirical research has shown that the increase in government subsidies, equity capital and bank loans have all helped to improve the capacity for self-driven innovation in Chinese enterprises.

5.3 *Malaysia Debt Ventures Bhd (MDV) IP Financing Scheme (IPFS)*

This RM200 million⁸⁹ IPFS was introduced by the Malaysian government on 13 December 2013 by the country's Minister of Finance II to assist the technology sector. According to Malaysia Debt Ventures Bhd (MDV), an innovative technology financier, the IPFS aims to further inculcate innovation and increase productivity. The initiative of RM200 million in financing is offered solely by MDV and enables companies to use their IP assets as an additional source of security to obtain funding and spur more investments for companies with technology capabilities, in turn encouraging innovation. The scheme also helps alleviate the difficulties faced by companies in the tech sector when they seek funding from financial institutions. The key features of the scheme are as follows:

- Financing of up to RM10 million or 80% of valued IP, whichever is lower;
- 5 years financing tenure (inclusive of a grace period of up to 12 months);
- 2% p.a. interest/ profit equalization payment;
- 50% guarantee provided by the Government of Malaysia and administered by Credit Guarantee Corporation Malaysia Berhad;
- Applicable for all MDV financing products (except post-shipment); and
- Discounted guarantee fee of 0.5% per annum.⁹⁰

⁸⁷See Basel Committee for Banking Supervision, Bank for International Settlements (2011), pp. 6–23, <http://www.bis.org/publ/bcbs189.pdf>. Accessed 14 May 2017.

⁸⁸See Basel Committee for Banking Supervision, Bank for International Settlements (2011), pp. 6–23, <http://www.bis.org/publ/bcbs189.pdf>. Accessed 14 May 2017.

⁸⁹Malaysian Ringgit currency.

⁹⁰See Malaysia Debt Ventures Berhad, <http://www.mdv.com.my/en/product-services/government-schemes/intellectual-property-financing/>. Accessed 14 May 2017.

The scheme will lend against registered IP (patent and trademarks are preferred). However, MDV generally requires a corporate guarantee and takes a debenture⁹¹ over the company's other assets.

The scheme has since disbursed RM40 million in loans to 11 companies and there are reportedly 19 new applications worth RM70.8 million, 6 of which are in the final evaluation stage. The applicants, most of whom emanate from the ICT⁹² sector, are qualified to enjoy the 2% government rebate and 50% government guarantee administered by Credit Guarantee Corp Malaysia Bhd. The loan term is 5 years (including a grace period of up to 12 months) carrying an interest rate of between 7.5% and 9.5%. MDV allocates a margin of 80% of the value of the IP (if the IP is valued at RM10 million then the amount advanced can be up to RM8 million).⁹³

The Malaysian government has recognized IP as an alternative source of security in finance transactions and the funds allocated by the IPFS should support the growth of business operations of eligible IP-rich companies.

IP valuation is increasingly relevant. Valuation is a key tool in the process of financing based on IP assets. Technical valuations are required of intangible assets to give a point in time value of the IP for the purpose of assets to secure loans. Numerous valuation techniques have been developed, but since the value of IP is context-based and may have various value dimensions at the same time, the development of international standardized techniques will be a challenge. Moreover, international accounting standard (IAS) 38 Intangibles may require amendment to provide an effective method for valuing IP to allow the impact of internally-generated corporate IP to be visualized.⁹⁴

The available methodologies for IP valuation work best with individual major patents and brands, which are the focus of the IPFS scheme.⁹⁵ Presently, there is no global standard for patent valuation. In 2007, the German Institute for Standardization (DIN) published PAS 1070 *General Principles of Proper Patent Valuation* (SAB) to assess the quality of valuation reports and expert appraisals. DIN initiated an international standardization project on patent valuation at the International Organization for Standardization (ISO). In 2010 ISO issued a standard on trademarks ISO 10668:2010.⁹⁶ This standard is a good starting point for brand valuation.

⁹¹A form of loan contract.

⁹²Information and communication technology.

⁹³See Wong (2015), <https://www.pwc.com/my/en/assets/press/150209-theedge-banking-on-intellectual-property.pdf>. Accessed 14 May 2017.

⁹⁴See ICC (2017), <https://cdn.iccwbo.org/content/uploads/sites/3/2014/11/icc-IProadmap-intellectual-property-roadmap-current-emerging-issues-business-policymakers.pdf>. Accessed 19 May 2017.

⁹⁵See, for example, Haigh (2004), http://brandfinance.com/images/upload/2004_05_brand_valuation_iam.pdf. Accessed 14 May 2017.

⁹⁶See ISO (2010) at http://www.iso.org/iso/catalogue_detail?csnumber=46032. Accessed 14 May 2017.

The move to train a specialized team of IP valuation professionals is an inspiring initiative and will help Malaysian banks and financial institutions, which were previously unlikely to engage in IP-backed finance, to accept registered and valued IP assets as security. The Intellectual Property Corporation of Malaysia (MyIPO) is responsible for coordinating the training of the IP valuation team.⁹⁷

Note however that in secured lending practice, it is increasingly common for the debtor to agree to grant a security interest in all its present and future IP assets, in which case the security is not based on a specific IP asset. The legal documentation is asset-based only in a formal sense. There is a problem then, in terms of secured lending theory, as to why the extent of priority is often linked to the value of specific assets.⁹⁸

5.4 Hong Kong

The ground-breaking intellectual capital statement (ICS) initiative was introduced in 2010 by five Hong Kong Banks which offer young SMEs more favorable financial and/or service privileges if they prepare their own ICS. In relation to IP-backed lending, since 2010 five Hong Kong banks⁹⁹ have offered more favorable financial and/or service privileges to successful business loan applicants who have voluntarily prepared their own ICS. The Hong Kong Intellectual Property Department (HKIPD) worked closely with the Hong-Kong based banks to facilitate this. HKIPD have also produced a helpful *Guide to Intellectual Capital Management* to assist credit applicants on how to produce a narrative disclosure of their IC/IP assets.¹⁰⁰

The effect of this initiative is to turn lenders into ‘information demanders’ who use the information to inform their credit appraisal and lending decisions. Whereas, we have seen in Sect. 1 above that most European lenders only rarely identify and consider IP assets in SME credit appraisal decisions, instead focusing their attention on the familiar: traditional tangible assets such as land and equipment. Lenders in other countries, with the exception of Japan (the next jurisdiction to be discussed), are not yet ‘IP information demanders’.

In essence, this initiative passed on the cost of preparing the ICS to the young IP-rich SME. By providing their *Guide to Intellectual Capital Management*, the HKIPD have attempted to support SMEs to manage, capture and disclose their IC/IP information.

⁹⁷See <http://www.myipo.gov.my/>.

⁹⁸See Siebrasse (1997), p. 3.

⁹⁹Bank of China (Hong Kong) Limited, Chon Hing Bank Limited, Citi Commercial Bank, Hang Seng Bank Limited and the Bank of East Asia. See Hong Kong Intellectual Property Department, <http://www.ipd.gov.hk/eng/home.htm>.

¹⁰⁰See Hong Kong Intellectual Property Department, http://www.ipd.gov.hk/eng/ICM/guide_icm_e.pdf. Accessed 14 May 2017.

However, it appears that what is also needed, but which is currently lacking, is a standardized approach for young SMEs to provide a useful, timely and relevant IC/IP management report tailored specifically to set out non-financial qualitative IC/IP information to assist lenders make IP-backed finance lending decisions. In relation to the corporate disclosure of IP assets by SMEs, the author has created in a simple triage-style model that is extensively discussed in her Ph.D. thesis “Patent-backed Debt Finance: Should Company Law Take the Lead to Provide a True and Fair View of SME’s Patent Assets?”.¹⁰¹ Japan, the subject of the next section, is unique in that it has developed its own official guidelines specifically for corporate IP asset and strategy disclosure in its efforts to enhance IP awareness in the business community as well as access to IP finance by young Japanese SMEs.

5.5 Japan

Japan is an interesting country renowned for its innovativeness in bringing to market new technologies and is largely a nation built on IP offsetting the low level of natural resources. The country has a robust and sophisticated national IP framework in place. Over the past decade, the Japanese government has introduced initiatives regarding the disclosure of intellectual capital (IC) which comprises IP among other things. Following business research in the field of knowledge management that began in earnest in the 1980s, in 2004 Japan’s Ministry of Economy, Trade and Industry (METI) introduced the *Guideline for Intellectual Property Information Disclosure* (GIPID)¹⁰² to increase the acknowledgement of IP assets through the voluntary extension of corporate reporting.¹⁰³ The Guideline states that the rationale for implementing an IP disclosure regime is that:

Becoming a nation that quests for sustained growth of its economy and society through vigorous promotion of creation, protection and exploitation of intellectual property, in short a “nation built on intellectual property,” is an urgent goal for Japan to strengthen its industrial competitiveness... the METI also established a “Pilot Model for Disclosing Patent and Technical Information” with the hope that those companies that practice “intellectual property-backed management” will disclose information concerning their intellectual property and gain fair market valuation.¹⁰⁴

As a result, Japanese lenders and other stakeholders presently have a greater awareness of the nature of IP assets and a more detailed understanding of firms’ IP

¹⁰¹See Denoncourt (2015).

¹⁰²See Ministry of Economy, Trade and Industry, Japan (2004), <http://www.meti.go.jp/english/information/downloadfiles/cIPP0403e.pdf>. Accessed 14 May 2017.

¹⁰³Johansen et al. (2006), pp. 474–491.

¹⁰⁴IAM Magazine (2014), p. 3, www.iam-media.com/ctredir.ashx?g=cc6edf40-3f31-4157-b1aa-0cb886775091. Accessed 14 May 2017.

strategies for value creation than those in other countries. This makes it easier for Japanese lenders to link the corporate IP asset and strategy information to the cost of debt.

The Japanese Government also shifted its IC and IP disclosure target from publicly listed-company investor communications to non-listed SME-financial institution communications with a view to adjusting the perceptions of lenders to IC and IP assets when contemplating loans to SMEs.¹⁰⁵ This shift occurred precisely for the reasons outlined earlier in Sect. 1 of this chapter, namely that young Japanese SMEs (in common with young SMEs around the world) still rely heavily on loans from financial institutions. During the shift, Japanese lenders were under the ‘Action Program Concerning the Enhancement of Relationship Banking Functions’.¹⁰⁶

As a result of these government-led initiatives, Japanese lenders have also become ‘information demanders’. More timely, relevant and useful IP asset information serves to better inform credit appraisal and lending decisions to young IP-rich Japanese SMEs. In addition, there is presently a higher degree of communication between SMEs and Japanese lenders, given the adoption of a closer ‘relationship-banking’ approach to SME lending. ‘Relationship-banking is a form of retail banking that involves direct advice to the client/borrower by a bank officer, who remains a point of contact on a range of value-added services. This is a strategy used by banks to enhance their profitability, by strengthening their relationships with clients and thereby increasing their loyalty. Shinji Hino, founder and CEO of Patent Finance Consulting, Inc.,¹⁰⁷ has had direct experience of successful IP-backed debt financing transactions with Mitsubishi Bank, the Development Bank of Japan and Fukuoka Bank. According to Hino, as the Japanese economy moves out of recession and begins to expand, IP finance is returning to pre-2008 levels, although lenders are insisting on lower loan to value (LTV) rates of circa 30% coupled with tighter annual monitoring of the secured IP assets.

In Japan, there already appears to be a different mind-set towards the viability of IP finance. The difference in the general governance structure of companies, however, is an important and unique factor, given the direct role banks have in the corporate governance structure. This is a unique approach which warrants discussion. According to Learmount,¹⁰⁸ the main bank system is widely perceived to be an important component of Japanese corporate governance arrangements, playing a significant role in the monitoring of company managers in lieu of shareholders. Japanese banks may hold company shares (up to a maximum of 5% of the company’s

¹⁰⁵Ordenez de Pablos and Edvinsson (2015), pp. 187–191.

¹⁰⁶Introduced by the Financial Services Agency (FSA) in March 2003. See FSA (2003), <http://www.fsa.go.jp/news/newse/e20030328-1a.pdf>. Accessed 14 May 2017.

¹⁰⁷See <http://www.ptfc.co.jp/english/>.

¹⁰⁸A Lecturer at the Judge Institute of Management, University of Cambridge.

total company equities), which is considered to give banks some incentive to monitor their clients.¹⁰⁹ More importantly, economists argue that the high gearing of Japanese companies has meant that bank lending takes on many of the characteristics of equity finance, which obliges banks to monitor client companies.¹¹⁰ A high percentage of the loans are secured (60–70%) against general rather than specific assets and banks generally ask companies for extensive ongoing access to company financial information when making a loan. This in turn leads to the lender playing an active role in supporting client companies during financial distress. According to Suzuki, who carried out a detailed analysis of 52 companies facing financial distress, the main determinant of recovery was the strength of the relationship with the main bank, defined in terms of the amount of outstanding loan, the extent of bank shareholding and the existence of employee transfers between the firm and the bank.¹¹¹ The main bank tends to provide only 20–30% of the total loan to an individual company. Learmount concludes:

... there is a broad consensus that banks have played a more prominent role in the Japanese financial system than is the case in other developed countries, particularly the US. Moreover, it is widely believed that the main bank has been important for corporate governance in Japan, as it is in a position to monitor company management in lieu of shareholders and is able to intervene quickly and effectively in the case of financial distress. For economists the main bank-company relationship is often summarized as being a system of 'contingent corporate governance'. When performance is good, corporate affairs are left to the incumbent management. When it deteriorates, the main bank, using its power as a lender and shareholder, intervenes in the management of companies to supervise downsizing and reorganization where necessary.¹¹²

Research into the role the main bank plays in Japanese corporate governance and lending practice is a relatively embryonic new area with little empirical data, especially in relation to young IP-rich SMEs.

In summary, various types of IP-backed debt finance initiatives have taken root in Asia. Asian government policy makers are the catalysts and together with private commercial lenders they have developed various initiatives and innovations in IP finance to attempt to stimulate young IP-rich SMEs' access to credit. Although beyond the scope of this chapter due to the language barrier and lack of publicly available English translation of key documents, there is an opportunity for further work here. The progress of Singapore, the PRC, Malaysia, Hong Kong and Japan with IP-backed debt finance should be carefully studied by international and nation-state government policymakers to learn lessons as to which IP finance methods prove to be effective and which are not. The notion of the lender as an IP

¹⁰⁹See Learmount (2002), p. 27.

¹¹⁰See Sheard (1987).

¹¹¹See Suzuki (1980), pp. 18–39.

¹¹²See Learmount (2002), pp. 28–29.

asset ‘information demander’ appears to be the first step in the process towards systematizing IP finance practice as it opens the door to facilitate a valuable dialogue between the directors of young IP-rich SMEs and lenders. The initiatives in Singapore, Malaysia, Hong Kong and Japan appear to create this new behavior in their relationship with the potential borrower. Company directors appear to tolerate demands for timely, relevant and useful information about their IP assets when they are expected to provide such information as the opportunity to acquire debt finance is a powerful incentive.¹¹³

6 Analysis of the Global Initiatives

Across the globe, lenders currently place trust in tangible assets, intangible equity assets (shares) and all kinds of other tricky, risky and complex financial products (e.g., derivatives and hedge funds etc.). What lenders are really saying to young IP-rich SMEs is “we trust borrowers who own other classes of assets more”. But is this trust in other asset classes misplaced? Are IP assets really more risky? Banks perceive less risk in lending against land, shares and other financial products, but the global financial crisis tells a different story. Traditional forms of security have turned out to be riskier than many lenders originally perceived.

We have seen that intergovernmental organizations such as WIPO and the OECD arrange seminars and compile resources specifically on this issue. UNCITRAL has included IP assets in the scope of its Legislative Guide on Secured Transactions (LGST). The LGST recommended that domestic secured transaction laws be harmonized internationally to reduced legal restrictions that impact on the availability of low-cost finance and credit. More recently, a number of governments have provided financial support for and established initiatives to encourage their young SMEs to exploit their IPR. The valuation of IPR and a formal IP asset and strategy report are critically important for young SMEs in this context.

The IP finance developments above indicate that IP assets will, in the future, play a greater part in the financial calculations of lenders than they have in the past. However, the high level of public funds to support IP finance in Asia stands in marked contrast to the position in the UK, Europe, the United States and other IP-intensive developed nations. In Asia, there is clear evidence of government-led collaborations between public and private sector organizations. These fledgling approaches should be encouraged and supported to link together, develop and support the direct participation and involvement of lenders in IP finance by lifting their awareness of IP and their use of IP in secured transactions. Such initiatives could have enormous impact.

¹¹³See Learmount (2002), p. 64.

6.1 Systemic Change and a Conceptual Framework for IP Finance

Evidence from a variety of different countries, all seems to be pointing in the same direction (subject to the caveat that cautions not to draw conclusions from one legal system and apply them to another) which is that lenders need to become IP asset and strategy ‘information demanders’ as the first step in systematizing IP finance.

The most broadly valid definition of systemic change is ‘change that pervades all parts of a system, taking into account the interrelationships and interdependencies among those parts’. The international community will need to collectively rethink the underemployed IP finance method and make it more viable as a finance alternative by integrating systemic thinking with the goal of reformatting it. In this vein, it is beneficial to distinguish ‘systemic change’ from ‘piecemeal change’. Piecemeal change entails changing one or several parts of a system. Systemic change recognizes interdependencies and makes the necessary changes in those other parts and their interrelationships. If the changes are compatible with the rest of the system, they will often be more successful.¹¹⁴ When a system’s ‘systemic environment’ undergoes few and small changes, piecemeal change to that system is most appropriate. When the systemic environment undergoes big changes, systemic change is needed.¹¹⁵ In the area of IP finance, ‘extreme’ systemic change (which is referred to as paradigm change) is necessary as IP assets have largely replaced traditional forms of security especially in the context of young IP-rich SMEs. There are still large gaps in our understanding of the impact and consequence of IP rights as commercial assets on other disciplines such as finance, and vice versa. Now that economies have evolved from the industrial age to the information age, there is a need for a paradigm change in finance. The term most commonly used for this kind of change is ‘transform’, to actually create a new form or structure for the system. ‘Systemic Design’ begins with broad and tangential information gathering in order to examine the array of issues surrounding any given problem, precisely what has been undertaken in this chapter which has surveyed the range of initiatives in a variety of jurisdictions. As the exploration develops, related information begins to cluster into what Berger terms ‘Systemic Bundles’.¹¹⁶ These bundles connect one discipline (e.g., secured transaction law) with a framework that is unrelated (e.g., IP law), within the new framework. An example of another bundle is IP law with International Accounting Standards, IP assets valuation standards and practice, and corporate regulation with respect to disclosure of intangibles.¹¹⁷ These connections represent clusters of issues that are imperative to examine in theory and in practice.

¹¹⁴See Systemic Change at <https://systemicchange.wordpress.com/systemicchange/>. Accessed 14 May 2017.

¹¹⁵See Berger (2009).

¹¹⁶See Berger (2009).

¹¹⁷Denoncourt (2015).

Consider the following systemic changes in the field of transportation, (an example involving tangibles). An initial system of human transport was the horse. The first mode of such transport was to ride the horse bareback, but eventually change occurred by way of fitting the horse with a saddle and bridle, making riding easier and less dangerous. The next critical change was the innovative horse-drawn wagon or coach, facilitating the transport of more passengers and cargo. The third change was a revolutionary one: replacing the horse with a gasoline engine vehicle, a new invention. A similarly revolutionary change eventually exceeded ground transport with another ground-breaking innovation, the airplane, facilitating the shift to air transport over longer distances in a faster way than ever before, even intercontinentally. Space travel and travel between planets is currently in the embryonic stage. These all represent vastly different points on the continuum from piecemeal to systemic change.¹¹⁸

Another example of successful systemic change that has direct import for IP finance is the Nobel prize-winning microfinance initiative by Grameen Bank. The Grameen Bank pioneered and popularized a methodology for extending small security-free loans for self-employment to some of the world's poorest people. Microfinance has had enormous impact, and is a prime example of systemic change to solve a problem. Academic Muhammed Yunus challenged banking theory by showing how to systematically extend security-free loans on a cost-effective basis to poor villagers on a large scale. The Grameen Bank now has over 7 million borrowers among approximately 77,000 villages in India. Microfinance is now a global movement and has been taken up by banking giants like Citigroup.¹¹⁹ IP finance is a complex issue, but the starting point for a global IP finance movement to produce systemic change is international public policy to coordinate the bundles of changes that are needed to accelerate the secured lending model to accommodate intangible IP assets.

6.2 *Lenders and IP-Backed Finance Policy*

Engaging with commercial lenders is a key component of systemic change in IP finance. Government policy-makers can encourage and guide commercial lending banks to develop contemporary written 'IP-Backed Lending' policies to provide a blueprint for lending decisions. According to Howard Crosse, formerly Vice-President of the Federal Reserve Bank of New York, "the very act of formulating a policy and expressing it in words that all agree, will sharpen the issues and make the end product more effective".¹²⁰ IP-backed debt lending strategies of

¹¹⁸See Systemic Change at <https://systemicchange.wordpress.com/systemicchange/>. Accessed 14 May 2017.

¹¹⁹See www.grameen.com. Accessed 14 May 2017.

¹²⁰See Crosse (1962).

commercial lending institutions should be drafted, if they do not already exist, or upgraded to attain the following broad objectives with respect to IP-backed lending:

1. profit maximization in the short and long term (taking into account the nature of the IP asset commercialization cycle) based on the lender's strategic plan;
2. conducting the IP-backed lending function within a managed risk framework; and
3. complying with existing capital adequacy requirements.

Such policies need to align with the lending codes of practice to ensure that the standards expected of banks in connection with the assessment of lending applications are met.

Profit maximization remains the chief concern of bankers around the world. In modern commercial lending, as in any other enterprise, the planning exercise must begin with a profit objective in view. The profit maximization elements of an IP-backed lending policy will primarily be drawn from a banks' strategic plan. In order for the commercial lender to strategically plan its approach to IP-debt finance and its central focus, namely profit, consideration of several issues will be needed. It is profit planning from which other policy sub-goals like targeted deposit growth, credit-deposit ratio, portfolio-mix, 'access to liquidity', transaction cost, loan repayment norms etc. will follow.¹²¹

The commercial lender's strategic plan for IP-backed lending will then give rise to the formulation of a loan policy document to enhance and upgrade IP-backed debt finance as a priority sector of development. The bank will need to analyse how the decision to make IP-backed loans will impact on its profitability. This is important for the purpose of the bank implementing an appropriate appraisal system of the potential borrower's IP assets. This requires a clear understanding of different operating and financial variables relating to IP rights as secured assets. Central to the development of a healthy IP-backed lending environment is the creditworthiness of both the IP-owning borrower and the lender.

In terms of the commercial lender's strategic plan, the aim should be for the IP-backed lending policy to encompass a five-year operational plan, keeping the profit objective in full view. The lender's short-term objectives to upgrade IP-backed lending will necessarily emanate from a medium-term goal, once it is translated into actionable strategies, and could be influenced by exposure to the existing IP finance initiatives taking place in various parts of the world (especially in Singapore, Malaysia, Hong Kong and Japan). The strategic plan should be straightforward and well-communicated to all levels of bank management, especially those dealing with young IP-rich SMEs who will know to ask for an IP asset and strategy report (or a more comprehensive IC report). Professional development for loan officers in terms of IP education as well as an engaged group of accredited IP valuers will be necessary.

¹²¹Bhattacharya (2010), p. 15.

The IP ecosystem is perceived as being complex, although its fundamental principles are simple. In time, lenders' trust in IP assets will develop and the IP asset class will mature and foster a reputation (a past credit history). Gaining a lenders' trust does not mean young IP-rich SMEs will successfully commercialize their IP assets; rather it provides the funding to move forward. Lenders will have an opportunity to dynamically monitor their loans by comparing the SME's financial information with its real time current account activity. Clearing banks across the world already have both a unique understanding of SMEs and the infrastructure to monitor small debt-financing.¹²²

In conclusion, at an international level, a 'Summit on the Global IP Finance' agenda is needed to further the work already begun by WIPO, UNCITRAL and the national state IP offices to nurture the necessary paradigm shift. An international IP finance brainstorming event, assembling those experienced in the IP finance initiatives outlined, as well as professional IP valuers and representatives from the accounting profession, would jointly explore and advance knowledge to foster the systemic change need to critically shape the fledgling piecemeal developments in IP finance.

7 Conclusions and Outlook: Supporting the Agile Development of Globally Enhanced Access to IP Finance

This chapter has consolidated global perspectives, knowledge, recent trends and developments in IP-backed debt finance around the globe to inform future policy directions to encourage lending to young IP-rich SMEs in the post-recession economy. Government research and initiatives have begun to play an expanding role in encouraging initiatives to support the extreme systemic change needed to support the development of IP-backed debt finance. IP assets comprise a rich and diverse set of intangible assets, behaviors and networks that influence both short-term and long-term economic growth. There are now real advances in various jurisdictions which were examined in a critical manner adopting a "What is the current practice?" approach. Studies of the UK, EU, Asian and American initiatives have import for systemic change in IP finance across the globe in first tier, second tier and third countries. The success or otherwise of such initiatives can provide a unique view of the future, a world where IP finance will become increasingly significant, as IP assets are a relatively untapped source of value and security, while tangible personal and business assets, such as buildings and land, continue to decline within the young SME community. In consequence, IP assets should be made available as sources of security in loan transactions.

¹²²In the UK for example, large clearing banks (institutions which clear bankers' cheques) in England and Wales include Barclays, HSBC, Lloyds Banking Group and Natwest.

The examples of positive momentum in economies that have recognized the infinite possibilities provided by robust IP finance systems aimed at enhancing young IP-rich SME access to IP finance through practical initiatives are:

- The UK government commissioned the *Banking on IP?* Report in 2013 and has followed this up with its *Banking on IP? an active response*,¹²³ published in March 2014, setting out the actions the UKIPO will take to improve access to finance for IP-rich SMEs.
- The EU published the *Final Report from the Expert Group on Intellectual Property Valuation (IP Valuation Report)* in 2014.
- In the US in October 2014, the Clearing House banking industry group formed the Patent Quality Initiative, a project aimed at eliminating inferior patents through better prior art searching, research and filing, thereby enhancing patent quality as a form of intangible property capable of being used as security.¹²⁴
- In April 2014 the IP Office of Singapore launched the S\$100 million ‘IP Financing Scheme’ to support local SMEs’ access to IP-backed debt finance with the involvement of DBS Bank, Ltd; Overseas-Chinese Banking Corp, Ltd; and the United Overseas Bank, Ltd.¹²⁵
- In 2008 the PRC implemented an ‘IP pledge financing’ program which has secured over £6 billion GBP in IP-backed loans and involves the China Development Bank, a PRC government-owned financial institution.
- In December 2013 the Malaysian government introduced the RM200 million Intellectual Property Finance System to assist the technology sector which is administered by Malaysia Debt Ventures Bhd (MDV), an innovative technology financier and Credit Guarantee Corporation Malaysia Berhad¹²⁶,
- In 2010 the Hong Kong Intellectual Property Department introduced the intellectual capital statement (ICS) initiative whereby five Hong Kong Banks (Bank of China [Hong Kong] Limited, Chon Hing Bank Limited, Citi Commercial Bank, Hang Seng Bank Limited and the Bank of East Asia offer young SMEs more favorable financial and/or service privileges if they prepare their own ICS.¹²⁷
- In 2004 Japan’s Ministry of Economy, Trade and Industry (METI) introduced the *Guideline for Intellectual Property Information Disclosure (GIPID)* to increase the acknowledgement of IP assets through a voluntary extension of

¹²³See <https://www.gov.uk/government/publications/banking-on-ip-an-active-response>. Accessed 14 May 2017.

¹²⁴Oblack (2014), http://www.patentqualityinitiative.com/news/press%20releases/2014_oct%2015_pqi%20launch. Accessed 14 May 2017.

¹²⁵See www.ocbc.com.sg.

¹²⁶See Malaysia Debt Ventures Berhad, <http://www.mdv.com.my/en/product-services/government-schemes/intellectual-property-financing/>. Accessed 14 May 2017.

¹²⁷See <http://www.ipd.gov.hk/eng/ICM>.

corporate reporting,¹²⁸ shifted its IC and IP disclosure target to non-listed SME-financial institution communications and implemented an ‘Action Program Concerning the Enhancement of Relationship Banking Functions’.¹²⁹

The majority of the initiatives involved a government agency acting in a supportive capacity and as a facilitator connecting lenders with SMEs. This research could form the basis for a larger more in-depth project to follow up the success or otherwise of the various initiatives and to share information regarding policy development and practical advice in the IP finance field. This could see a greater coherence of government involvement in stimulating IP finance beyond the present situation and work to systematize a tailored form of IP asset and strategy report tailored for lenders and financiers.

This chapter also considered how government policy-makers can work together with commercial lenders to take forward their IP-backed commercial lending policy with a view to creating systemic change by supporting them to become IP ‘information demanders’. Lenders who recognize and act to benefit from the enormous security potential in IP assets will have “first mover” advantage in the market.

In essence, the government initiatives examined are aimed at fostering a culture that encourages young SME success by adapting the ‘one-size-fits-all’ of corporate debt finance to a more tailored approach to benefit young IP-rich SMEs. By encouraging entrepreneurs, start-ups and young IP-rich SMEs to succeed, government policy will also boost competition which breeds innovation. There is ample room for countries to improve their IP finance environment in order to unleash the benefits of IP for young SMEs and the wider economy.

Policy makers have to constantly strive to maintain the delicate balance necessary to satisfy the rights of the IP assets owner and the interests of lenders, so that the IP finance system benefits society as a whole. Research that builds on this theme to better coordinate the piecemeal IP finance initiatives that are taking place may have import with respect to potential reforms to legal frameworks. While there will be clear efficiency capital advantages for IP-rich SMEs if IP finance becomes more commonplace, there are also efficiency losses for creditors (transaction, registration of security and enforcement costs) that need to be addressed. Setting the agenda of IP debt financing theory and a framework will require the careful coordination of several areas of law: corporate governance and corporate reporting of corporate IP assets; secured debt finance theory as it applies to IP portfolios and secured transactions; the registration of security interests in IP rights and IP licences; financial institution regulation; and bankruptcy and insolvency laws. These are the pillars of IP finance that require coordination in order to provide more certainty for lenders who become IP owners on default of the borrower.

¹²⁸See Ministry of Economy, Trade and Industry, Japan (2004), <http://www.meti.go.jp/english/information/downloadfiles/cIPP0403e.pdf>. Accessed 14 May 2017.

¹²⁹See Ordonez de Pablos and Edvinsson (2015), pp. 187–191. See also FSA (2003), <http://www.fsa.go.jp/news/newse/e20030328-1a.pdf>. Accessed 14 May 2017.

Creating a successful future for IP financing where lenders are IP ‘information demanders’ should result in better understanding of the value and potential of young IP-rich SMEs’ IP assets, making lenders more willing to secure loans against those assets which would have previously been deemed ‘too risky’. This would be a significant step in the further development of the IP-based economy for enterprises that do business domestically and internationally, enabling governments to achieve their economic goals for innovation and the creative industries.

The range of international governments and public bodies addressing IP finance policy, including the state Intellectual Property Offices, should encourage and support systemic change in this area, leading to capacity building and the synergistic development of IP finance frameworks, lowering the cost of accessing credit and garnering more trust in IP assets as a form of security for lending.

References

- Andres D, Criscuolo C, Menon C (2014) Do resources flow to patenting firms: cross-country evidence from firm-level data. http://www.oecd-ilibrary.org/economics/do-resources-flow-to-patenting-firms_5jz2lpmk0gs6-en. Accessed 13 May 2017
- Brand O (2006) Conceptual comparison: towards a coherent methodology of comparative legal studies brook. *J. Int'l L* 32:405–466
- Bazinas S (2009) International policy development on IP financing: United Nations commission on international trade law (UNCTRAL) legislative guide on secured transactions and current work on security interests in IP rights. http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=118036. Accessed 13 May 2017
- Berger A (2009) Systemic design can change the world. SUN Architecture, Amsterdam
- Bhattachary H (2010) Banking strategy, credit appraisal and lending decisions: a risk-return framework. Oxford University, Oxford, p 15
- Basel Committee for Banking Supervision, Bank for International Settlements (2011) Basel III: a global regulatory framework for more resilient banks and banking. <http://www.bis.org/publ/bcbs189.pdf>. Accessed 14 May 2017
- Brassell M, King K (2013) Banking on IP? The role of intellectual property and intangible assets in facilitating business finance final report. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312008/ipresearch-bankingip.pdf. Accessed 13 May 2017
- Crosse HD (1962) Management policies for commercial banks. Prentice-Hall Inc., Englewood, New Jersey
- Cohen M (2012) China to provide financial incentives for filing patent applications abroad China. <http://chinaipr.com/2012/06/>. Accessed 14 May 2017
- Collopy D, Chun KH (2014) Singapore: IP financing scheme launched. <http://www.managingip.com/Article/3362420/Singapore-IP-financing-scheme-launched.html>. Accessed 14 May 2017
- Criscuolo C, Gal PN, Menon C (2014) The dynamics of employment growth: new evidence from 18 countries. <http://cep.lse.ac.uk/pubs/download/dp1274.pdf>. Accessed 13 May 2017
- Deane M (2009) Financial institutions’ perspective of IP financing. http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=118034. Accessed 13 May 2017
- Department for Business, Innovation & Skills, Intellectual Property Office and Cable V (2013) Plans unveiled to support IP-rich businesses get funding. <https://www.gov.uk/government/news/plans-unveiled-to-support-ip-rich-businesses-get-funding>. Accessed 14 May 2017

- Department for Business, Innovation and Skills and Viscount Younger of Leckie (2014) UK knowledge investment continues to grow. <https://www.gov.uk/government/news/uk-knowledge-investment-continues-to-grow>. Accessed 13 May 2017
- Denoncourt J (2015) Patent-backed debt finance: should company law take the lead to provide a 'true and fair' view of SME patent assets. Dissertation, University of Nottingham
- Edwards D (2001) Patent backed securitization: blueprint for a new asset class. https://www.researchgate.net/publication/241479825_Patent_Backed_Securitization_Blueprint_For_a_New_Asset_Class. Accessed 13 May 2017
- EPO, OECD, and the UK Patent Office (2006) Patents: realising and securing value—an international conference in London. <http://www.prnewswire.co.uk/news-releases/patents-realising-and-securing-value—an-international-conference-in-london-154779345.html>. Accessed 13 May 2017
- European Commission (2012) Options for an EU instrument for patent valorisation. <https://www.iphelpdesk.eu/node/867>. Accessed 13 May 2017
- European Commission (2014) Final report from the expert group on intellectual property valuation EU. https://ec.europa.eu/research/innovation-union/pdf/Expert_Group_Report_on_Intellectual_Property_Valuation_IP_web_2.pdf. Accessed 14 May 2017
- FSA (2003) Action program concerning enhancement of relationship banking functions (background and basic policy concept). <http://www.fsa.go.jp/news/newse/e20030328-1a.pdf>. Accessed 14 May 2017
- Forsythe M, Sanderson H (2011) Financing China costs poised to rise with CDB losing sovereign-debt status. <http://www.cn-c114.net/583/a599201.html>. Accessed 14 May 2017
- Federation of Small Business (2012) ALT + finance: small firms and access to finance. http://www.fsb.org.uk/docs/default-source/Publications/reports/fsb_2012_access_to_finance.pdf?sfvrsn=1. Accessed 18 May 2017
- Garrett JF (1995) Banks and their customers. Oceana Publications, Dobbs Ferry NY, p 99
- Gower A (2006) Growers review of intellectual property. <https://www.gov.uk/government/publications/gowers-review-of-intellectual-property>. HM Treasury on behalf of the Controller of Her Majesty's Stationery Office, p. 3
- G20 (2009) G20 leaders statement: the Pittsburgh summit. <https://www.oecd.org/g20/summits/pittsburgh/publicationsdocuments/>. Accessed 13 May 2017
- Global Intellectual Property Center of US Chamber of Commerce (2016) Infinite possibilities US chamber international IP index forth edition February 2016. http://www.theglobalipcenter.com/wp-content/themes/gipc/map-index/assets/pdf/2016/GIPC_Index_2016_Final.pdf. Accessed 13 May 2017
- Haigh D (2004) Brand valuation: what it means and why it matters. http://brandfinance.com/images/upload/2004_05_brand_valuation_iam.pdf. Accessed 14 May 2017
- Hong Kong Intellectual Property Department (2009) Put your enterprise knowledge to work: a guide to intellectual capital management. http://www.ipd.gov.hk/eng/ICM/guide_icm_e.pdf. Accessed 14 May 2017
- ISO (2010) 10668:2010: Brand valuation—Requirements for monetary brand valuation. http://www.iso.org/iso/catalogue_detail?csnumber=46032. Accessed 14 May 2017
- IAM Magazine (2014) A revolution postponed (May/June 2014). www.iam-media.com/ctredir.ashx?g=cc6edf40-3f31-4157-b1aa-0cb886775091. Accessed 14 May 2017
- IP China News (2014) Patent right pledge financing amounted to 25 billion Yuan as reported in English at <http://www.chinaipr.gov.cn/article/nocategory/201403/1801673.html>. Accessed 14 May 2017
- IPOS (2014a) IP financing scheme. <http://www.ipos.gov.sg/IPforYou/IPforBusinesses/IPFinancingScheme.aspx>. Accessed 14 May 2017
- IPOS (2014b) Singapore launches s\$100 m IP financing scheme & first one-stop IP service centre. <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/272/category/Press%20Releases/parentId/80/year/2014/Default.aspx>. Accessed 14 May 2017

- IPOS (2014c) Singapore ranks tops in Asia for IP Protection at <https://www.ipos.gov.sg/MediaEvents/Readnews/tabid/873/articleid/249/category/Press%20Releases/parentId/80/year/2013/Default.aspx>. Accessed 14 May 2017
- ICC (2017) The ICC intellectual property roadmap. <https://cdn.iccwbo.org/content/uploads/sites/3/2014/11/icc-IProadmap-intellectual-property-roadmap-current-emerging-issues-business-policymakers.pdf>. Accessed 13 May 2017
- Johansen U et al (2006) The Japanese government's intellectual capital reporting guideline: what are the challenges for firms and capital market agents? *J Intellect Capital* 7(4):474–491
- Learmount S (2002) *Corporate Governance: what can be learned from Japan?*. Oxford University, Oxford, p 27
- Lomax S, Davies E (2013) SME journey towards raising external finance. <http://www.bmgresearch.co.uk/sme-journey-towards-accessing-external-finance/>. Accessed 13 May 2017
- Leung P (2014) From ideas to assets: Singapore's IP financing scheme. <http://www.managingip.com/Article/3382687/From-idea-to-asset-Singapores-IP-financing-scheme.html>. Accessed 14 May 2017
- Lloyd R (2014) New banking group launches with focus on improving patent quality at <http://www.iam-magazine.com/blog/detail.aspx?g=972D0D5D-D116-42FD-945D-82AC28C33B3A>. Accessed 14 May 2017
- Ministry of Economy, Trade and Industry, Japan (2004) Reference guideline for intellectual property information disclosure in the pursuit of mutual understanding between companies and capital markets through voluntary disclosures of information on patent and technology. <http://www.meti.go.jp/english/information/downloadfiles/cIPP0403e.pdf>. Accessed 14 May 2017
- Oblack S (2014) Patent quality initiative launched to facilitate better patents and fewer disputes. http://www.patentqualityinitiative.com/news/press%20releases/2014_oct%2015_pqi%20launch. Accessed 14 May 2017
- Ordonez de Pablos P, Edvinsson L (2015) Intellectual capital in organizations: Non-financial reports and accounts. Routledge, Abingdon, pp 187–191
- Palmer VV (2004) From Lerotholi to Lando: some examples of comparative law methodology. *Global Jurist Frontiers* 4(2):1–31
- Suzuki S (1980) Kyuusai yuushi ni okery "meinu banku" chikara (The strength of relief capital from main banks) *Keiou Keiei Ronshuu*, 18–39
- Sheard P (1987) Intercorporate shareholdings and structural adjustments in Japan. Research School of Pacific Studies, Australia-Japan Research Centre Australian National University, Canberra
- Sato I (2013) Study on governing law on security rights in intellectual property. https://www.iip.or.jp/e/e_summary/pdf/detail2012/e24_18.pdf. Accessed 13 May 2017
- Shao F, Feng X (eds) (2014) *Innovation and intellectual property in china: strategies, contexts and challenges*. Edward Elgar, Cheltenham
- Tuncak B (2009) The WIPO information meeting on ip financing: some notes. <http://www.ip.finance/2009/03/wipo-information-meeting-on-ip.html>. Accessed 13 May 2017
- UNCITRAL (2010) *Uncitral legislative guide on secured transactions supplement on security rights in intellectual property* available. http://www.uncitral.org/uncitral/en/uncitral_texts/security/ip-supplement.html. Accessed 13 May 2017
- UK Intellectual Property Office (2014) *Banking on IP?-an active response* <https://www.gov.uk/government/publications/banking-on-ip-an-active-response>. Accessed 14 May 2017
www.patentqualityinitiative.com
- Walmsley J (2001) *Patenting finance: financing patents*. <http://www.icmagroup.org/assets/documents/Patenting%20Finance%20Financing%20Patents.pdf>. Accessed 13 May 2017
- WIPO (2008a) Conferencia subregional de la OMPI-AGENCIA-MinCyT sobre la disponibilidad del capital intelectual: el rol de los activos intangibles como herramienta para obtener financiamiento. http://www.wipo.int/meetings/en/details.jsp?meeting_id=16342. Accessed 14 May 2017
- WIPO (2008b) *IP financing—an introduction*. http://www.wipo.int/wipo_magazine/en/2008/05/article_0001.html. Accessed 13 May 2017

- WIPO (2009) WIPO meeting to explore ip as a financing tool. http://www.wipo.int/pressroom/en/articles/2009/article_0003.html. Accessed 13 May 2017
- WIPO (2011) What is intellectual property? <http://www.wipo.int/publications/en/details.jsp?id=99&plang=EN>. Accessed 13 May 2017
- Wild J (2014) Chinese company's \$1.3 billion patent and trade mark loan enters the IP deal Pantheon at <http://www.iam-media.com/blog/Detail.aspx?g=481b76b6-637f-427f-b8d6-78d06cece504>. Accessed 14 May 2017
- WIPO (2015) WIPO SME e newsletter. <http://www.wipo.int/sme>. Accessed 13 May 2017
- Wong A (2015) Banking on IP. <https://www.pwc.com/my/en/assets/press/150209-theedge-banking-on-intellectual-property.pdf>. Accessed 13 May 2017