

INTELLECTUAL PROPERTY SECURITIZATION

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Abstract

This Article aims to explore the securitization of intellectual property, introducing the promise of said financing method in the growing field of intellectual property. In recent years, intellectual property has become a major component of developed economies. Raising funds for research, development, and the creation of new inventions and works of authorship has never been an easy task. This Article, therefore, presents a review of securitization in the field of intellectual property and in doing so makes a few major contributions. It offers a thorough discussion of securitization, its benefits, and its prominence over more traditional methods of financing, such as bank lending, issuance of corporate bonds, and venture capital funding. Next, it offers an account of the current use and scope of securitization in relation to intellectual property assets such as trademarks, copyrights, and patents. The Article also considers the benefits and challenges of securitizing intellectual property and suggests preliminary solutions to these challenges.

I. INTRODUCTION

In today's information age, high technology products protected by copyrights, patents, and trademarks have become an important resource in the modern economy. In the past, economic strength was rooted in ownership of tangible goods – such as real estate, personal property, and natural resources but nowadays, information products – such as pharmaceuticals, computer software, databases, films, musical works, broadcasts of sporting events, and brand names – have become major

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assets in modern economies' wealth. High tech industries, which are based on intellectual property rights, are now a driving force for economic growth and constitute a significant component in the gross domestic product (GDP) of developed countries. According to recently released data, industries based in intellectual property rights contribute a gigantic 5.8 trillion dollars to the GDP of the United States, constituting 38% of the country's total GDP.¹ As the relative segment of developed countries' GDPs occupied by intangible property continues to grow over that of tangible property, it is not surprising that the motivation to capitalize on intellectual property rights as a method for financing is also growing.

This Article sheds light on an innovative financing channel whose full hidden potential has not yet been realized – that of securitization of intellectual property rights. Securitization is a major financing tool in the modern economy.² Securitization of assets backed by future income streams continues to grow as leading source of financing and as a replacement for traditional financing methods such as obtaining bank credit or issuing corporate bonds. The use of securitization as an advanced financing tool has spread to a wide variety of fields and starting in the mid-1990s has penetrated the intellectual property field. Among the famous securitization transactions in the field of intellectual property rights are the securitizations of the copyrights of the singer David Bowie, the trademark of the Domino's Pizza chain, and the patent on the HIV drug developed by Yale University.

Securitization allows for the capitalization of intellectual property rights that generate predictable streams of royalties in order to obtain interim financing for business operations.³ It eases the dependence on bank credit, reduces financing costs, is considered off-balance-sheet in terms of accounting, diversifies investment options in the capital market,

¹ Mark Elliot, *IP Creates Jobs for America*, GLOBAL INTELL. PROP. CENTER (May 25, 2012), available at: <http://www.theglobalipcenter.com/blogs/ip-creates-jobs-america>.

² Lynn M. LoPucki, *The Death of Liability*, 106 YALE L. J. 1, 24 (1996); Thomas E. Plank, *Bankruptcy Professionals, Debtor Dominance, and the Future of Bankruptcy: A Review and a Rhapsody on a Theme*, 18 BANKR. DEV. J. 337, 362 (2002) (book review); Edward M. Iacobucci & Ralph A. Winter, *Asset Securitization and Asymmetric Information*, 34 J. LEGAL STUD. 161, 162 (2005).

³ Comm. on Bankr. & Corporate Reorganization of the Ass'n of the Bar of the City of N.Y., *Structured Financing Techniques*, 50 BUS. LAW. 529-30 (1995) [hereinafter *Structured Financing Techniques*]; Robert Stark, *Viewing the LTV Steel ABS Opinion in its Proper Context*, 27 J. CORP. L. 211, 213 (2002); Steven L. Schwarcz, *The Alchemy of Asset Securitization*, 1 STAN. J.L. BUS. & FIN. 133, 135-36 (1994).

removes barriers to entry in investment in the intellectual property field, and advances and supports expansion and diversification in the world of creativity and innovation. Over the years, these benefits and others have turned the securitization of copyrights, trademarks, and patents into a common occurrence and indeed, the global securitization market of intellectual property rights is continuing to grow steadily.

Consideration of the securitization of intellectual property is therefore critical in light of its growing use as a financing tool and especially in light of challenges faced by authors, inventors, and businesses in raising funds. These challenges are the greatest in the field of technological development and patenting where small businesses, which are generally considered more innovative than large businesses,⁴ face significant challenges in raising capital.⁵ On average only 10 percent of small businesses manage to successfully raise funds in the market and bring an innovative idea into commercialization. The majority of small businesses fail. Offering additional avenues for raising funds, which are not necessarily dependent on institutional market players such as banks, venture capital firms, or other traditional financing schemes should therefore be considered both desirable and noteworthy. Furthermore, the securitization of intellectual property is in line with the theoretical foundations of an incentive and recoupment-based intellectual property regime and advances such goals by providing authors, inventors, and businesses with an additional source for financing.

The structure of this Article is as follows: Part II introduces the theoretical foundations of the field of financing generally and securitization more specifically and presents the structure of a securitization transaction, depicting the securitization market for intellectual property including the different players and tools and their roles in this process. Part III offers an overview of the theoretical foundations of intellectual property and describes the development of the securitization markets for copyrights, trademarks, and patents. Part IV analyzes the benefits of the securitization of intellectual property rights,

⁴ Ted M. Sichelman, & Stuart Graham, *Patenting by Entrepreneurs: An Empirical Study*, 17 MICH. TELCOM. TECH. L. REV. 111, 114 (2010); SAMUEL KORTUM & JOSH LERNER, ASSESSING THE CONTRIBUTION OF VENTURE CAPITAL TO INNOVATION, 31 RAND J. ECON. 674, 682 (2000); ZOLTAN J. ACS & DAVID B. AUDRETSCH, INNOVATION AND SMALL FIRMS 19–24 (1990); John Bound et al., *Who Does R&D and Who Patents?*, in ZR & D, PATENTS, AND PRODUCTIVITY 21, 38–39 & 51–52 (Zvi Griliches ed., 1984).

⁵ Sichelman, & Graham, *supra* note 4, at 146.

not only from the perspective of the right-holders who wish to get credit, but also from the perspectives of the investors in the capital markets and that of the general public. Part V examines the obstacles standing in the way of further growth of the securitization market for intellectual property and suggests methods for overcoming them. Moreover, it suggests future questions to be explored regarding the securitization of intellectual property. Finally, Part VI briefly summarizes the discussion.

II. THEORETICAL FOUNDATIONS OF SECURITIZATION

1. Rights as Tradable Assets

In the past, most wealth was found in the forms of tangible property - that is, real property or personal property. With the development of the economy, a widespread change took place in the types of properties owned and contractual rights began to claim a significant portion of the total value of assets owned. It seems that in the modern world, the majority of wealth is found in bank accounts – such as checking accounts, savings plans, and financial deposits – provident funds, pension funds, insurance, and securities. These are all essentially contractual rights against specific obligors.

Contractual rights are assets that can serve as the object of different transactions. Like with traditional transactions of real or personal property, modern law recognizes the possibility of carrying out transactions in rights. Contractual rights can be transferred to third parties through sales, secured transactions, gifts, or even through inheritance.⁶ As property, contractual rights are also exposed to the possibility of seizure and are included in the debtor's estate, namely, the assets of the debtor to be distributed among its creditors in bankruptcy.⁷

This treatment of contractual rights as transferrable property is essential for economic development in general and for the advancement

⁶ A contractual right can be assigned unless “(a) the substitution of a right of the assignee for the right of the assignor would materially change the duty of the obligor, or materially increase the burden or risk imposed on him by his contract, or materially impair his chance of obtaining return performance, or materially reduce its value to him, or (b) the assignment is forbidden by statute or is otherwise inoperative on grounds of public policy, or (c) assignment is validly precluded by contract.” *See* Restatement (Second) of Contracts § 317(2) (1981).

⁷ Under Section 541(a)(1) of the Bankruptcy Code, the debtor's estate includes all property in which it has “legal or equitable interests . . . as of the commencement of the case.” *See* 11 U.S.C. § 541(a)(1) (2006).

of the credit market in particular.⁸ The notion of an assignment of rights for the purpose of raising funds is extremely prevalent and significant in the modern economy.⁹ For example, a company wishing to raise credit in order to finance business operations may utilize future cash-flow, that is, the contractual rights against customers for the sale of goods or the provision of services. The law's recognition of the validity of such transactions allows the company to sell its trade receivables¹⁰ or use them as a security interest in exchange for receiving a sum of cash in the present. In short, the company can use its rights to collect payment from customers at a future date as a means to raise interim financing for its business activities.

If the law did not recognize the validity of transactions of rights, companies would be precluded from deriving benefit from trade receivables until their actual collection. As a result, the ability of companies to finance current operations would be restricted to the limited use of equity or loans secured by their tangible assets. It can therefore be concluded that not recognizing the validity of transactions of rights would cause serious damage to the credit market and, as a result, a significant reduction in business activity.

⁸ See the famous assertion of Macleod: "If we were asked – Who made the discovery which has most deeply affected the fortunes of the human race? We think, after full consideration, we might safely answer – The man who first discovered that a Debt is a Saleable Commodity" (1 H. MACLEOD, *PRINCIPLES OF ECONOMICAL PHILOSOPHY* 481 (2d ed., 1872) as quoted by E. ALLAN FARNSWORTH, *CONTRACTS* 682 n.1 (4th ed., 2004)).

⁹ The United Nations Convention on the Assignment of Receivables in International Trade emphasizes that assignment of rights, such as securitization transactions, are fundamental for the financing of international trade. The purpose of the Convention is to promote the movement of goods and services across national borders by facilitating increased access to lower-cost credit. See United Nations Convention on the Assignment of Receivables in International Trade (New York, 2001) http://www.uncitral.org/uncitral/en/uncitral_texts/security/2001Convention_receivables.html.

¹⁰ "Accounts receivable" or "book debts" are money owed by a business' customers for goods supplied or services rendered that have not yet been paid for. They are treated as current assets on the business' balance sheet. See HUGH BEALE ET AL., *THE LAW OF PERSONAL PROPERTY SECURITY* 216 (2007); E. P. ELLINGER, EVA LOMNICKA & RICHARD HOOLEY, *MODERN BANKING LAW* 786-787 (3rd ed., 2002); FIDELIS ODITAH, *LEGAL ASPECTS OF RECEIVABLES FINANCING* 19-23 (1991); ROY GOODE, *LEGAL PROBLEMS OF CREDIT AND SECURITY* 99-100 (3rd ed., 2003).

The discussion in this Article is focused on the utilization of royalty streams deriving from intellectual property as means for raising funds. Intellectual property rights are intangible rights in informational products, such as inventions, works of authorships, or trademarks, in which a set of exclusive rights is given to the right holder under which she may use the work in an unrestricted manner while others can do so only upon the permission of the right holder. In the United States all types of intellectual property protection are essentially recognized as property rights. As such, property rights can be transferred in different ways. The right holder can either assign her work fully, granting others full ownership (an assignment) of her intellectual property rights or decide to offer a more limited form of permission by granting either exclusive or non-exclusive licenses to use all or a limited set of her protectable rights. In exchange for a license, the right holder receives a specific royalty rate over a period of time, usually the lifetime of the intellectual property right at issue. The existence of such future cash flows allow for the securitization of the contractual rights of the licensor to receive royalties from the licensees and enables the intellectual property right owner to raise funds.

2. Securitization and Other Sources of Financing

Asset securitization is a modern financial tool based on the assignment of contractual rights to future payments. Securitization enables a company, known as the “originator,” to utilize assets that produce a predictable cash flow – typically rights to payments owed to the company¹¹ – in order to raise interim financing for its business activities. The typical securitization structure involves separating specific assets, such as one or many accounts receivable, from the originator’s other assets and selling them to a separate legal entity. The latter is commonly referred to as a special purpose vehicle (SPV) because it is formed solely for the purpose of the securitization transaction. The SPV finances the purchase of the securitized assets by issuing securities that are backed by those same assets, known as asset-backed securities (ABS).¹² The cash flow produced by the underlying assets funds the payments to investors in the asset-backed securities.

In order to understand the extraordinary innovation of securitization it is important to analyze it in light of more traditional

¹¹ These assets usually originate in loans or property or services supplied to the originator's customers. See Kenneth C. Kettering, *Securitization and Its Discontents*, 29 CARDOZO L. REV. 1553, 1564 (2008); Schwarcz, *supra* note 3, at 135 n.7.

¹² See Iacobucci & Winter, *supra* note 2, at 164.

financing methods. To that end, in the next paragraphs securitization is compared to bank lending, issuance of corporate bonds, and venture capital funding.

Companies in need of credit often apply to commercial banks for loans. The banks then investigate the company's financial situation and decide whether or not to approve the loan. Banks may require a security interest in the debtor company's property as collateral for the loan. Since the risk of default on secured loans is less than on unsecured loans, banks charge lower interest rates on secured loans.

Bank lending has two significant shortcomings when compared with asset securitization. The first is rooted in the different methods of determining interest rates. The interest rate on a bank loan is based on the creditworthiness of the debtor company. In order to determine the interest rate, the bank has to evaluate the default risk of the entire company. The bank must therefore carefully investigate the overall business activity of the company and the value of its general pool of assets. Even if the loan is secured by collateralized assets, the bank is still exposed to the overall risk of default for two reasons. First, when the value of the collateral falls below the amount of the bank's secured claim,¹³ the claim splits into two parts: the amount still covered and secured by the collateral and the remaining unsecured balance that has no priority in a case of bankruptcy. In such a case, the bank would have to collect the unsecured part of its claim from the company's bankruptcy estate.¹⁴ Second, regardless of whether the bank's interest is fully

¹³ In this context, the value of the claim includes the loan principal, the cumulative interest, and the foreclosure costs. *See* 11 U.S.C. § 506(b) (2006) ("To the extent that an allowed secured claim is secured by property the value of which, after any recovery under subsection (c) of this section, is greater than the amount of such claim, there shall be allowed to the holder of such claim, interest on such claim, and any reasonable fees, costs, or charges provided for under the agreement or State statute under which such claim arose."); *id.* § 506(c) ("The trustee may recover from property securing an allowed secured claim the reasonable, necessary costs and expenses of preserving, or disposing of, such property to the extent of any benefit to the holder of such claim, including the payment of all ad valorem property taxes with respect to the property.").

¹⁴ *Id.* § 506(a). This is true when the loan arrangement provides the lender with a right of recourse against the borrower. If the foreclosure sale proceeds do not satisfy the borrower's obligation on a recourse loan, the lender may obtain a deficiency judgment for the balance. However, if a borrower defaults on a nonrecourse loan, the lender is limited to repayment only by foreclosure of the secured asset. On the difference between recourse and nonrecourse loans, *see* Dov Solomon & Odelia Minnes, *Non-Recourse, No Down Payment and the*

secured or even over-secured, a bankruptcy petition against the debtor company will delay repayment, and the collateral may be used for the company's reorganization. When a debtor initiates bankruptcy proceedings, the Bankruptcy Code provides for an automatic stay of proceedings, which temporarily suspends secured creditors'¹⁵ right to realize the collateral.¹⁶ When a secured creditor's interest is adequately protected, the Bankruptcy Code allows the debtor in possession to make use of the collateral in the effort to rehabilitate the company.¹⁷ Indeed, a major concern for secured creditors is that their right to realize the collateral will be suspended by a stay of proceedings and that the secured property will go toward rehabilitating the company. This explains the bank's interest in comprehensively checking the overall business activity of the debtor company and the value of its general pool of assets in order to understand and diminish the risk of insolvency.¹⁸

In contrast, in securitization transactions the interest rate of asset-backed securities is not dependent on the risks involved in the originator's overall business activity. Rather, the interest rate is derived only from the risk inherent to the specific assets backing the securities. By isolating specified assets and securitizing them, the originator is able, in most cases, to fund operations at an effective interest rate lower than that of traditional financing methods.¹⁹ This lower effective rate results

Mortgage Meltdown: Lessons from Undercapitalization, 16 FORDHAM J. CORP. & FIN. L. 529, 537-41 (2011).

¹⁵ A secured creditor is a creditor that has been given a security interest in the debtor's assets. U.C.C. § 9-102(a)(72) (1999) (definition of "secured party").

¹⁶ 11 U.S.C. § 362(a) (2006). Although a secured creditor has the right to have the stay lifted if its security interest is not adequately protected, such adequate protection has not been construed to require that the secured creditor be paid interest by way of compensation for the long delay in realization that the stay itself imposes on the secured creditor. *See id.* § 362(d)(1); *United Sav. Ass'n v. Timbers of Inwood Forest Assocs.*, 484 U.S. 365, 370-72 (1988).

¹⁷ *See* 11 U.S.C. §§ 363(c)(2), 363(e) (2006). Adequate protection could be provided to a secured creditor by granting it a replacement lien on some illiquid substitute assets or even by doing nothing at all if there is a sufficient equity cushion in the collateral. *See id.* § 361.

¹⁸ On the interest that secured creditors have in monitoring the debtor company's financial situation, *see* Thomas H. Jackson & Anthony T. Kronman, *Secured Financing and Priorities Among Creditors*, 88 YALE L.J. 1143, 1149-50 (1979); Schwarcz, *supra* note 3, at 150.

¹⁹ For an empirical study that shows the savings securitization yields in financial costs, *see* James A. Rosenthal & Juan M. Ocampo, *Analyzing the Economic Benefits of Securitized Credit*, J. APPLIED CORP. FIN., Fall 1988, at 32 (finding that securitization produces financing cost savings of 1.3% per annum). *See also* Lowell Bryan, *The Risks, Potential, and Promise of Securitization*, in

from the fact that securitization shifts the focus from the creditworthiness of the originator to the credit quality of the underlying assets.²⁰ For that reason, using securitization as a financing tool is highly beneficial for companies with relatively low credit ratings but high quality assets that produce predictable cash-flows.

The second deficiency involved in bank lending is its limited range. A bank's lending is ultimately limited by the amount of its own capital. Banks are required to maintain a minimum capital adequacy ratio (CAR).²¹ This ratio serves to protect depositors and promote the stability and efficiency of the financial system. According to the worldwide capital adequacy standard set by the Basel Committee of the Bank for International Settlements (BIS), banks must hold minimum capital as a percentage of risk-weighted assets (loans and investments). When a bank's capital approaches the minimum capital requirement level, its ability to provide credit is limited.

Moreover, the concentration of the credit portfolio constitutes one of the sources of credit risk in the banking corporations, and awareness of this has resulted in limitations being set on the indebtedness of a borrower or a group of borrowers.²² The purpose of such limitations is to protect the safety and soundness of banks and savings associations by preventing excessive loans to one borrower or to related borrowers that are financially dependent and to promote diversification of loans and equitable access to banking services.

A PRIMER ON SECURITIZATION 171, 174 (Leon T. Kendall & Michael J. Fishman eds., 1996).

²⁰ HUGH BEALE ET AL., *supra* note 10, at 242 (2007); 1 TAMAR FRANKEL, *SECURITIZATION—STRUCTURED FINANCING, FINANCIAL ASSETS POOLS, AND ASSET-BACKED SECURITIES* 133-34 (1991); Robert Dean Ellis, *Securitization Vehicles, Fiduciary Duties, and Bondholders' Rights*, 24 J. CORP. L. 295, 302 (1999); Christopher W. Frost, *Asset Securitization and Corporate Risk Allocation*, 72 TUL. L. REV. 101, 105 (1997); Lois R. Lupica, *Asset Securitization: The Unsecured Creditor's Perspective*, 76 TEX. L. REV. 595, 613-14 (1998); Minh Van Ngo, *Getting the Question Right on Floating Liens and Securitized Assets*, 19 YALE J. ON REG. 85, 153-54 (2002); *Structured Financing Techniques*, *supra* note 3, at 529-31; Gregory R. Salathe, Note, *Reducing Health Care Costs Through Hospital Accounts Receivable Securitization*, 80 VA. L. REV. 549, 554-55 (1994).

²¹ Capital adequacy ratio (CAR) is a measure of the financial strength of financial institutions. It is expressed as a percentage of financial institution's primary capital to its assets (loans and investments).

²² *See, e.g.*, 12 C.F.R. § 32.3 (lending limits).

Therefore, bank credit is sometimes not available for a company because of regulatory limitations on lending to a single borrower or a group of borrowers. In these cases, the possibility of obtaining non-bank credit through securitization is essential for companies seeking funding. The existence of the securitization market therefore increases companies' accessibility to credit.

Another common method of raising credit is the issuance of corporate bonds. As a form of non-bank credit the issuance of bonds is not restricted by regulatory limits on lending to a single borrower or a group of borrowers. The bonds are issued in capital markets and distributed among institutional and private investors. The large scope of the capital markets makes the extent of financing almost unlimited, however, as with bank loans, the issuance of corporate bonds comes with a higher interest rate than asset-backed securities. In a securitization transaction, the separation of certain types of highly liquid assets from the risks generally associated with the company reduces the risk to investors. The reduced risk provides asset-backed securities with higher ratings than bonds issued directly by the company. This causes investors to require lower interest rates. Compared to the issuance of corporate bonds, asset securitization therefore significantly reduces the cost of funds.

The venture capital (VC) industry is another popular method of raising funds.²³ Venture capital funds invest in early-stage, high-potential, high-growth, and high risk startup companies in exchange for equity in the companies in which they invest. Typical venture capital investments occur after the seed funding round. It is meant to generate a return through an eventual realization event, such as trade sale of the company or an initial public offering (IPO). Funding through venture capital is very common in high technology industries, such as biotechnology, software, and information technology (IT). There are significant advantages in using securitization as a financial tool rather than venture capital funding. First, in exchange for the high risk that venture capital funds assume by investing in smaller and less mature companies, they often get significant control over company decisions as well as a significant portion of the company's equity.²⁴ The typical contractual arrangements between a company and a venture capital fund

²³ See generally ANDREW METRICK & AYAKO YASUDA, *VENTURE CAPITAL AND THE FINANCE OF INNOVATION* (2nd ed., 2010).

²⁴ Gompers explains that extra control rights are given to the venture capital fund as a response to adverse selection problems in early-stage financing where information asymmetries between the company and the venture capitalist are greatest. See Paul A. Gompers, *Optimal Investment, Monitoring, and the Staging of Venture Capital*, 50 J. FIN. 1461 (1995).

give the latter control power.²⁵ For example, the venture capital fund commonly receives greater board representation – often an absolute majority of the board – than it would if board representation were proportional to overall voting power. Board control gives the venture capitalist the right to replace the company's chief executive officer if performance lags. Even when the venture capital fund lacks board control, the agreement between the company and the venture capitalist typically gives the latter veto power over significant operating decisions by the company.

In the case of securitization, on the other hand, the company's shareholders do not need to cede ownership or control of the company in order to raise funds. Financing through securitization does not entail the issuance of new equity by the originator and thus shares are not diluted and an individual shareholder's portion is not minimized. Moreover, investors have no interest in restricting or monitoring the originator's business activity since the repayment of the principal and interest payments to investors in asset-backed securities is not dependent on the originator's financial situation but on the quality of the assets backing the securities.²⁶ Asset securitization, as opposed to venture capital funding, thus allows shareholders and management to keep control of the company and does not restrict their autonomy in the decision making process.

Second, asset securitization can be structured to be more “patient” than venture capital funding by specifying longer maturities. Ten- to 20-year maturities are not atypical for asset-backed securities. The possibility of long prospects of investors in asset-backed securities contrasts sharply with the considerably shorter prospects of venture capitalists.²⁷ Asset-backed securities can tailor the investment prospects to suit the business programs of early-stage companies, enabling

²⁵ Bernard S. Black & Ronald J. Gilson, *Venture Capital and the Structure of Capital Markets: Banks Versus Stock Markets*, 47 J. FIN. ECON. 243 (1998).

²⁶ Lois R. Lupica, *Circumvention of the Bankruptcy Process: The Statutory Institutionalization of Securitization*, 33 CONN. L. REV. 199, 239 (2000).

²⁷ The agreement between a venture capital fund and capital providers typically sets a maximum term for the fund of 7-10 years, after which the fund must be liquidated. Moreover, venture capital funds have strong incentives to exit from their investments in early-stage companies, when feasible, well before the end of this period. See William A. Sahlman, *The Structure and Governance of Venture-Capital Organizations*, 27 J. FIN. ECON. 473 (1990); Black & Gilson, *supra* note 25.

research to follow the most scientifically productive paths instead of being constrained by financially driven business deadlines enforced by the venture capital industry.²⁸

3. Players in the Securitization Market

In order to raise interim funds for business activities, it is possible to utilize intellectual property rights in one's possession. For the purposes of the securitization transaction, a Special Purpose Vehicle (SPV), constituting a separate, independent legal entity, is established and the royalty income streams from the intellectual property rights are assigned to it. The SPV funds the purchase of the income streams by raising credit from investors in the capital market through the issuance of asset-backed securities, that is, securities backed by securitized intellectual property rights.

The following paragraphs briefly present the central players in the securitization market in general as well as other important tools used in this market, using examples from the field of intellectual property, which is the subject of this Article.

A. Originator

The initiator of the securitization transaction for the purposes of raising credit is termed the "originator." In the process of securitization, the originator isolates a group of intellectual property assets with foreseeable future cash flows and assigns the rights to the cash flows to a SPV in exchange for the immediate receipt of a sum of money. The isolation of intellectual property assets intended for securitization from the range of the originator's assets has the potential to reduce financing costs since the costs are dictated solely by the quality of the assets to be securitized and not from the risks entailed in the originator's overall

²⁸ This benefit of asset securitization is especially relevant for biopharmaceutical research and development, for which untimely interruptions due to financial constraints often destroy significant economic value, even for genuinely effective treatments. The possibility of such interruptions alone may be enough to alter important strategic decisions regarding the direction of research in the early stages of drug discovery. The securitization structure mitigates these scientifically disruptive (though economically rational) effects and still manages to provide useful financial discipline and motivation for the company, which will still need to make periodic interest payments. However, the ability to defer much larger principle payments is ideally suited to projects with longer-term payoffs such as those in the biomedical field. See Jose-Maria Fernandez, Roger M. Stein & Andrew W. Lo, *Commercializing Biomedical Research Through Securitization Techniques*, 30 NATURE BIOTECH. 964 (2012).

business activity. Therefore, the use of securitization as a financing tool generally allows intellectual property owners to reduce the cost of raising credit, effectively improving their accessibility to funding sources.²⁹

In the basic structure of the securitization transaction, only one originator is involved. However, the securitization market also recognizes the more complex structure involved in a multi-seller securitization conduit, in which a number of originators take part.³⁰ In this structure, different originators assign their intellectual property rights to one SPV that issues securities backed by the rights assigned to it by various sources. Two obvious benefits are inherent in such a transaction: first, the lowering of transaction costs. Since one SPV serves a number of originators, each originator saves the startup costs of establishing a separate SPV. Second, since the securitized intellectual property rights are from different sources, the pool of assets backing the securities is more diversified, meaning that the investors in said securities enjoy a greater level of investment diversification.³¹

B. Special Purpose Vehicle (SPV)

A Special Purpose Vehicle³² is established in order to acquire income streams (royalties) of intellectual property rights and issue securities backed by the acquired rights. SPVs take a number of different legal forms in securitization markets throughout the world, such as: a company, a trust, or a partnership. The decision as to which type of SPV

²⁹ See the discussion in Part IV.

³⁰ Schwarcz, *supra* note 3, at 140-141.

³¹ Jay H. Eisbruck, *Credit Analysis of Intellectual Property Securitization: A Rating Agency Perspective*, in FROM IDEAS TO ASSETS: INVESTING WISELY IN INTELLECTUAL PROPERTY 441, 457 (Bruce Berman ed., 2002).

³² In law and economics literature the SPV is sometimes referred to as a special purpose company or special purpose entity. See Ellis, *supra* note 20, at 299 (“[T]he borrower or issuer is often an intermediary entity, such as a wholly owned or completely separate ‘orphan’ corporate subsidiary, often referred to as a ‘Special Purpose Corporation’ or ‘SPC’ (although a limited partnership, limited liability company, or trust could easily serve this function, in which case the term ‘Special Purpose Vehicle’ or SPV would be employed.)”); BOND MKT. ASS’N ET AL., SPECIAL PURPOSE ENTITIES (SPEs) AND THE SECURITIZATION MARKETS 1 n.1 (2002), available at <http://www.isda.org/speeches/pdf/SPV-Discussion-Piece-Final-Feb01.pdf> (noting that the terms SPV and SPE can be used interchangeably).

to establish is influenced by the desire to protect investors by distancing them from the risk of bankruptcy of the SPV. Therefore, in many securitization transactions, the SPV is established as a company whose board of directors is comprised individuals acting on behalf of the security owners, thereby retaining veto power over the board's decision to open bankruptcy proceedings.³³

The money that the SPV raises through issuing asset-backed securities is used as payment for the acquisition of the intellectual property rights from the originator. After the asset-backed securities are issued, the SPV constitutes a "pipeline" delivering cash flow deriving from the intellectual property rights to the investors in the security.

For the most part, a new SPV is created for each securitization transaction in order to avoid creditors' claims regarding previous activities of the corporation.³⁴ In order to minimize any risk involved in its activities, the SPV's organic documents generally prohibit it from acting in areas not directly related to the securitization transaction.³⁵ The securitization is the sole purpose of the SPV. Since the SPV has no other assets except for the intellectual property rights it acquired and no other obligations except the asset-backed securities it issued, there is no significant risk involved. The main risk involved in asset-backed

³³ The appointment of a director on behalf of the secured bond holders in order to mitigate the risk that the SPV will initiate a bankruptcy procedure independently raises an interesting discussion regarding the duties of trusts of the directors of the company. See *In re Kingston Square Associates*, 214 B.R. 713 (Bankr. S.D.N.Y. 1997); Ellis, *supra* note 20; Michael J. Cohn, *Asset Securitization: How Remote is Bankruptcy Remote?*, 26 HOFSTRA L. REV. 929 (1998); A. Brent Truitt & Bennett J. Murphy, *Bankruptcy Issues in Securitizations*, in SECURITIZATIONS: LEGAL AND REGULATORY ISSUES § 2.04 (Patrick D. Dolan & C. VanLeer Davis III eds., 2000 & supp. 2006); Walter G. McNeill, Paul T. Cohn & Sharon Youdelman, *Utilizing Structured Financing Techniques*, in 1 WEIL, GOTSHAL & MANGES, REORGANIZING FAILING BUSINESSES: A COMPREHENSIVE REVIEW AND ANALYSIS OF FINANCIAL RESTRUCTURING AND BUSINESS REORGANIZATION 4-21 (Marvin E. Jacob et al. eds., 1998, supp. 2003). Using a trust as an SPV in order to minimize the risk of bankruptcy, see John H. Langbein, *The Secret Life of the Trust: The Trust as an Instrument of Commerce*, 107 YALE L. J. 165, 172-173 (1997); Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L. J. 387, 421 (2000).

³⁴ David J. Kaufmann et al., *Franchise Securitization Financings*, 27 FRANCHISE L.J. 241, 243 (2008).

³⁵ Kenneth C. Kettering, *supra* note 11, at 1564-65; Stark, *supra* note 3, at 215-216; Schwarcz, *supra* note 3, at 135-136; Truitt & Murphy *supra* note 33 at Section 2.03; Fidelis Oditah, *Great Britain*, in ASSET-BACKED SECURITIZATION IN EUROPE 99, 102 (Theodor Baums & Eddy Wymeersch eds., 1996); *Structured Financing Techniques*, *supra* note 3, at 554.

securities therefore comes from the quality of the intellectual property rights that secure it and not the actions of the SPV that issued it.³⁶

C. Servicer

Since the SPV is not prepared to administer the collection of royalties deriving from the intellectual property rights assigned to it, it enters into an agreement with a servicer - generally the originator - for collection purposes.³⁷ In the complex structure of a multi-seller securitization conduit, in which different originators transfer their income stream (royalties) of intellectual property rights to one SPV, it is common to select one originator as a master servicer of all of the securitized assets.³⁸ The agreement for collection services generally sets out the procedure for replacing the servicer should she become insolvent or otherwise have difficulty carrying out the job properly.³⁹

The servicer transfers the continuous royalty streams deriving from the intellectual rights to the SPV, which then transfers the cash flow to the investors (i.e., purchasers of the asset-backed securities) less the payments to providers of transaction services (such as the rating agency, the underwriter, and the trustee for the security holders) and insurance premiums. For the short period during which the amount designated for the SPV is in the hands of the originator/servicer, the SPV and the security holders are exposed to the risk that the originator will become insolvent and a liquidator will attempt to obtain the designated money. As protection from the risk involved in the aforementioned scenario, the royalty funds are held in trust by the originator for the benefit of the SPV.⁴⁰

³⁶ Thomas J. Gordon, *Securitization of Executory Future Flows as Bankruptcy-Remote True Sales*, 67 CHI. L. REV. 1317, 1324 (2000).

³⁷ Stark, *supra* note 3, at 214.

³⁸ 2 FRANKEL, *supra* note 20, at 76-77 (supp. 1999).

³⁹ See Federal Deposit Insurance Corporation v. Bernstein, 944 F. 2d 101 (2d Cir. 1991) (cancelling an agreement of charging services due to the failure of the servicer to timely pay the owners of the asset-backed securities). See also 2 FRANKEL, *supra* note 20, at 94; Thomas E. Plank, *The True Sale of Loans and the Role of Recourse*, 14 GEO. MASON L. REV. 287, 295 (1991).

⁴⁰ 2 FRANKEL, *supra* note 20, at 94-95; HUGH BEALE ET AL., *supra* note 10, at 244 (2007); Steven L. Schwarcz, *The Parts Are Greater than the Whole: How Securitization of Divisible Interests Can Revolutionize Structured Finance and Open the Capital Markets to middle-Market Companies*, 1993 COLUM. BUS. L. REV. 139, 148.

D. Investor

The securitization process constitutes a unique source of funds for payments to be made to the investors in an asset-backed security – the royalty stream deriving from the intellectual property rights that were securitized.⁴¹ The investment in asset-backed securities is done partially by the investor herself or indirectly, through institutional investors such as provident funds, pension funds, and insurance companies. The relatively low risk in this type of investment comes from the division between the securitized assets and the overall business activities of the originator⁴² as well as from the broad diversification created by the size of the pool of assets backing the securities,⁴³ especially in the case of a multi-seller securitization conduit.

E. Credit Rating Agency

Given that layman investors do not have the knowledge and expertise required to evaluate financial assets, prudent investment decisions in asset-backed securities are largely based on credit ratings determined by a credit rating agency.⁴⁴ The purpose of the rating is to minimize the knowledge disparity between the issuer and the rest of the capital market. Credit ratings lower the cost of the knowledge, which would otherwise be borne by investors in the asset-backed securities market, and supply them with vital information regarding the risks involved in the investment.⁴⁵

The rating reflects the assessment of the likelihood that the cash flow deriving from the securitized intellectual property rights will be able to fully repay the principal and interest payments of the asset-

⁴¹ Joseph C. Shenker & Anthony J. Colletta, *Asset Securitization: Evolution, Current Issues and New Frontiers*, 69 TEX. L. REV. 1369, 1376 (1991).

⁴² Minh Van Ngo, *Agency Costs and the Demand and Supply of Secured Debt and Asset Securitization*, 19 YALE J. ON REG. 413, 461 (2002).

⁴³ Ellis, *supra* note 20, at 301.

⁴⁴ The leading international ratings companies are: Standard and Poor's (S&P), Moody's Investors Service, and Fitch Ratings. For a discussion of the regulation of rating agencies see Claire A. Hill, *Regulating the Rating Agencies*, 82 WASH. U. L. REV. 43 (2004).

⁴⁵ For the role of rating agencies in the securitization process see Neil D. Baron, *The Role of Rating Agencies in The Securitization Process*, in A PRIMER ON SECURITIZATION 81 (Leon T. Kendall & Michael J. Fishman eds., 1996).

backed security within the designated time. The higher the credit rating of the asset-backed securities, the lower the interest rates will be on the investments.⁴⁶ The high ratings that are generally given to asset-backed securities allow originators to reduce their financing costs.

Rating agencies provide guidelines for designing securitization transactions financially, legally, and operationally in order to reduce the exposure of the involved parties and third parties to risk. As part of the rating process and in order to improve the ratings of the asset-backed securities, rating agencies may establish various restrictions regarding the structure of the securitization transaction. Thus, for example, rating agencies tend to require SPVs to incorporate with the sole purpose of the securitization in order to minimize the risks involved in their actions.⁴⁷

F. Credit Enhancements

In the securitization market there are various mechanisms of credit enhancement whose purpose is to further lower the risk to investors in asset-backed securities. These mechanisms are meant to protect investors from possible vulnerabilities of the royalty streams deriving from the intellectual property rights backing the securities. Effective use of these credit enhancing methods thus heightens the likelihood that asset-backed securities will be paid off in full and on time. Effectively, credit enhancements improve the rating that the securities are given by the rating agency.

It is common to divide the different mechanisms of credit enhancement into two main categories depending on the party carrying the risk in the securitized intellectual property rights. The distinction depends on whether the party carrying the risk is internal or external to the securitization transaction.⁴⁸ In external credit enhancement mechanisms an uninvolved financial institution undertakes the risks while in internal credit enhancement mechanisms the originator takes the risk upon herself.

A) External Credit Enhancement

External credit enhancement mechanisms are based on parties with stable financial strength, such as banks or insurance companies,

⁴⁶ Shenker & Colletta, *supra* note 41, at 1401.

⁴⁷ EILIS FERRAN, MORTGAGE SECURITIZATION – LEGAL ASPECTS 17 (1992); I FRANKEL, *supra* note 20, at 394-395.

⁴⁸ Structured Financing Techniques, *supra* note 3, at 549-50.

which provide guarantees or insure the risk inherent in the securities issued in securitization transactions.⁴⁹ The rating agency determines the requisite amount of coverage for the guaranteeing or insuring party such that the asset-backed securities will receive investment grade credit ratings.⁵⁰ In this way, up until the determined level of coverage, all losses from the securitized intellectual property are assumed by the guaranteeing or insuring party. However, it is common for the originator to assume the risk for loss first. This arrangement constitutes a kind of “deductible” for the originator in a certain percentage of the losses. Its purpose is to deal with the phenomenon of moral hazard and minimize the effect of the information gap between the originator and the guarantor or insurer as to the element of risk involved in the intellectual property rights.⁵¹

B) Internal Credit Enhancement

Internal credit enhancement is used to improve the credit ratings of asset-backed securities and to increase their attractiveness to investors in the capital market. It is based on increasing the pool of assets backing the securities in a securitization transaction.⁵² This basic mechanism for credit enhancement is designed to create “over-collateralization,” such that the value of the intellectual property rights backing the securities issued in the securitization transaction exceed what is required for repayment.⁵³ The difference between the value of the securitized assets and the value of the issued securities plus the payments to service-providers in the transaction provides a “safety net” for losses, and therefore the risks to which the investors in the asset-backed securities are exposed is small. However, by and large, internal credit

⁴⁹ Schwarcz, *supra* note 3, at 139-140.

⁵⁰ Credit rating in one of the higher four ratings reflects a debt with a high likelihood of payment and is considered an investment rating. The lower ratings, on the other hand, reflect more speculative and riskier debts.

⁵¹ For overview of the moral hazard phenomenon, see Tom Baker, *On the Genealogy of Moral Hazard*, 75 TEX. L. REV. 237 (1996); CAROL A. HEIMER, REACTIVE RISK AND RATIONAL ACTION, MANAGING MORAL HAZARD IN INSURANCE CONTRACTS (1985).

⁵² Improving the credit rating of asset-backed securities as a result of employing internal enhancers of credit enables the achievement of higher returns in the capital market and thereby compensates the originator for the costs entailed in enlarging the number of assets that are backing the securities. See Luc Thevenoz, *Switzerland*, in ASSET-BACKED SECURITIZATION IN EUROPE 241, 246 (Theodor Baums & Eddy Wymeersch eds., 1996).

⁵³ Schwarcz, *supra* note 3, at 140-41.

enhancement through over-collateralization alone is not enough to gain the asset-backed securities a maximum credit rating; rather the rating agencies require additional credit enhancements.⁵⁴

Another common method of internal credit enhancement in the securitization market is based on the division of the asset-backed securities into tranches at different priority levels.⁵⁵ In securitization transactions that use this mechanism different series of asset-backed securities are issued: senior securities and subordinated securities. The subordinated securities constitute a safety net for the senior securities, since the losses from the intellectual property assets backing the securities are first charged against them.⁵⁶ Dividing the issuance into different tranches with rates determined by the rating agency entitles the senior securities to an investment-grade credit rating. In contrast, the subordinated securities receive a lower credit rating since their holders are only entitled to the balance of the cash flows coming from the securitized intellectual property rights once the senior securities and service providers have been paid.

The senior securities are sold to the general investment community. The subordinated securities, which embody the element of risk in the intellectual property rights, are purchased by the originator or by sophisticated investors such as hedge funds who are interested in securities with high levels of risk and return. Leaving the subordinated securities in the hands of the originator lowers its moral hazard and positively affects its conduct both in the securitization stage as well as in the revenue collection stage. In the securitization stage – it is in the originator's best interest to securitize high quality assets, given that the losses from them are first charged against the subordinated securities. In the collection stage – leaving the subordinated securities in the hands of the originator, who often works as the servicer providing the revenue collection, creates an incentive to track down problematic debts in order to maximize the return on the subordinated securities.

Additionally, from the perspective of economic efficiency, the originator's purchase of subordinated securities is justified. The originator has the best knowledge as to the quality of the intellectual

⁵⁴ Ronald S. Borod, *Origin and Evolution of Securitized Structures*, in *SECURITIZATION: ASSET-BACKED AND MORTGAGE-BACKED SECURITIES* 1-21 (Ronald S. Borod ed., 1991 & supp. 2004).

⁵⁵ Schwarcz, *supra* note 3, at 143-44.

⁵⁶ Plank, *supra* note 39, at 305.

property rights being securitized and is therefore best situated to estimate the value of the subordinated securities, which embody the risks present in the assets. This information gap that exists between the originator and the potential buyers of subordinated securities results in greatly discounted prices offered by the potential buyers of subordinated securities. The originator would therefore prefer not to sell the subordinated securities to third parties at lower than what it estimates to be the value but rather simply to purchase them directly.

G. Trustee

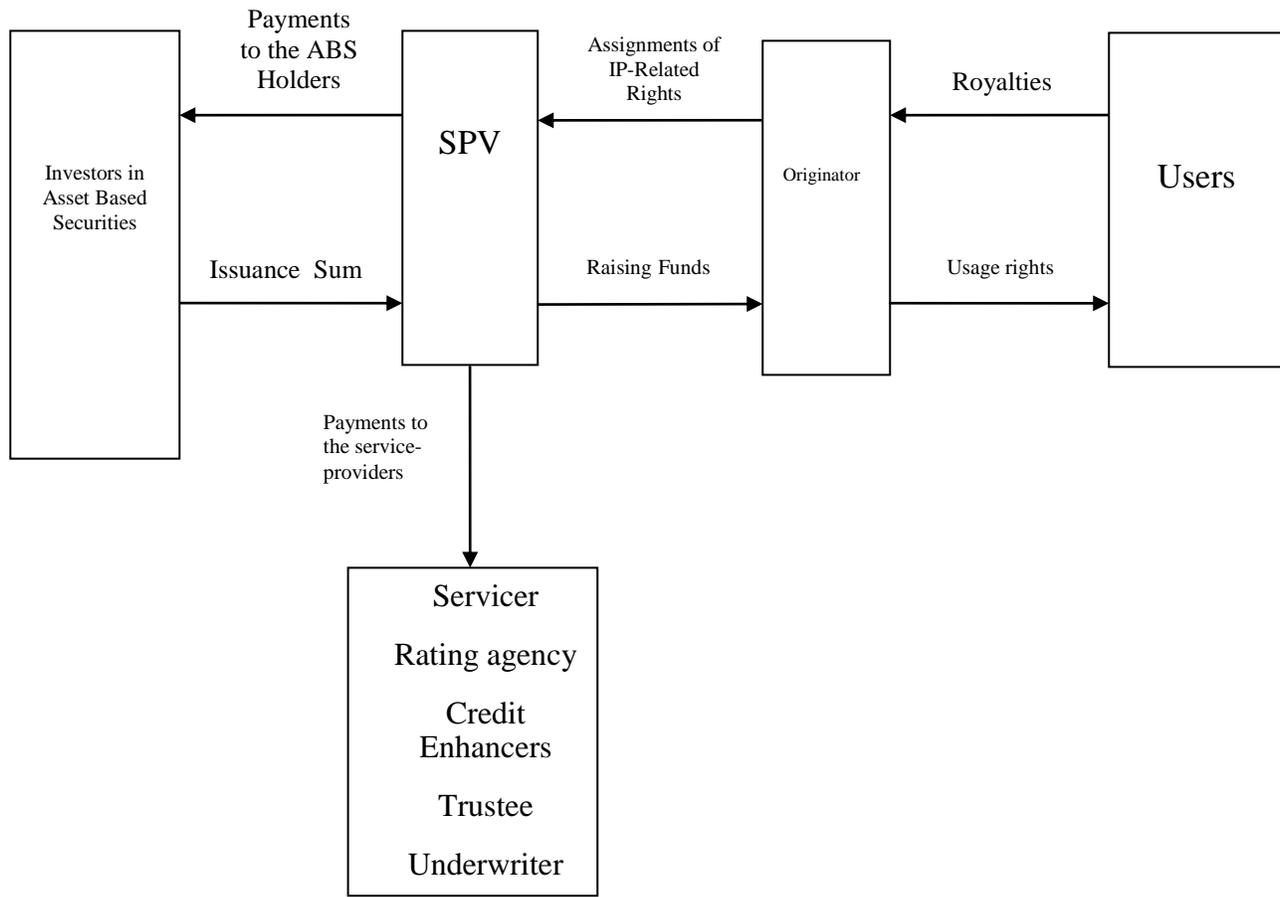
In the securitization process, a lien on the intellectual property rights is granted to the investors in asset-backed securities. The lien is registered in the name of a trustee in favor of the security holders, who work to protect the interests of the investors. The duties of the trustee in the securitization transaction are detailed in the deed of trust⁵⁷ and include, among others, monitoring the deposit of the royalty streams of the securitized assets in the trust account for the benefit of the security holders and overseeing the transfer of payments to the various service providers (servicer, rating agency, insurance company, etc.). The trustee is assisted by the current reports forwarded by the servicer regarding the state of the cash flow deriving from the intellectual property rights. The transaction documents usually give the trustee the authority to replace the servicer if it is determined that the quality of service is compromised.

H. Underwriter

An underwriter or a consortium of underwriters is put in the charge of the relationship between the SPV and the capital market.⁵⁸ Traditionally, the underwriter's job is to ensure the success of the offering by committing to purchase issued securities that are not purchased by the public. The underwriter also assists in planning and structuring the offering, including determining the number of securities to be issued to the public and their prices and coordinating the process of marketing and distributing the securities to the investment community. The underwriter's profits derive from charging an underwriting fee determined as a certain percentage of the value of the offering.

⁵⁷ See Susan S. Steves Keiser, *The Role of the Trustee in Securitization Transactions*, in *SECURITIZATION: ASSET-BACKED AND MORTGAGE-BACKED SECURITIES* ch. 8 (Ronald S. Borod ed., 1991 & supp. 2004).

⁵⁸ Structured Financing Techniques, *supra* note 3, at 529.

Diagram: Intellectual Property Securitization – Transaction Structure and Payment Streams

III. SECURITIZATION OF INTELLECTUAL PROPERTY RIGHTS

The use of securitization as an advanced financing tool began in the 1970s with the issuance of securities backed by residential mortgages.⁵⁹ As the years passed, the use of securitization spread to a variety of different assets including credit card receivables, commercial mortgages, equipment leases, automobile loans, hotel and hospitality receivables, health care receivables, student loans, municipal rates, and franchise fees.⁶⁰ There is essentially no limit to the variety of assets that can be securitized. It is virtually possible to securitize any asset that yields a foreseeable future cash-flow.⁶¹ This Article concentrates on the potential of the securitization of intellectual property rights as a means of raising capital. With the expansion of the securitization market and its spread to unconventional fields, intellectual property securitization is thought to be one of the areas that have seen the most development in recent years.⁶² Beginning in the mid-1990s, intellectual property rights have constituted the basis for securitization transactions. In the following paragraphs, we briefly survey the underlying theories of intellectual property rights with a detailed discussion of each field and the development of the securitization markets of copyrights, trademarks, and patents.

1. Copyrights

Copyright law aims to incentivize the creation of creative works. There are many theories that attempt to justify copyright law. Ranging from natural rights approaches to democracy enhancing justifications, copyright law is traditionally justified in Anglo-American legal systems by utilitarian theories suggesting that copyrights should be granted to

⁵⁹ Shenker & Colletta, *supra* note 41, at 1383-88. For a historical overview of the development of the mortgage-backed securities market in the United States, see John J. McConnell & Stephen A. Buser, *The Origins and Evolution of the Market for Mortgage-Backed Securities*, 3 ANN. REV. FIN. ECON. 173 (2011).

⁶⁰ Iacobucci & Winter, *supra* note 2, at 161-62; Shenker & Colletta, *supra* note 41, at 1380; Structured Financing Techniques, *supra* note 3, at 538-39; I FRANKEL, *supra* note 20, at 8, 37-38; *id.* at 9-12, 18-19 (Supp. 1999); Lupica, *supra* note 20, at 602-603; Yuliya A. Dvorak, *Transplanting Asset Securitization: Is the Grass Green Enough on the Other Side?*, 38 HOUS. L. REV. 541, 546-547 (2001).

⁶¹ Lupica, *supra* note 26, at 208; LoPucki, *supra* note 2, at 25; Shenker & Colletta, *supra* note 41, at 1397.

⁶² Eisbruck *supra* note 31, at 444.

authors in order to incentivize the creation of works of authorship.⁶³ The economic model of copyright assumes that without copyright protection authors would not create works of authorship because they would be exposed to copying by free riders who would offer the work for a price lower than the author's and as a result be able to affect the author's ability to recoup her investment in creating the work in the first place.⁶⁴

The U.S. Constitution explicitly grants Congress the power to create copyright law. Specifically, it provides that Congress has the power "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."⁶⁵ US copyright law is aimed at encouraging the creation of "original works of authorship," including literary, dramatic, musical, artistic, and certain other intellectual works by rewarding authors with a set of exclusive economic and moral rights.⁶⁶ It grants authors the exclusive right to reproduce the work in copies or phonorecords;⁶⁷ to prepare derivative works based upon the work;⁶⁸ to distribute copies or phonorecords of the work to the public by sale, rental, or other means;⁶⁹ to perform the work publicly;⁷⁰ to display the work publicly;⁷¹ and to digitally transmit sound recordings.⁷² American copyright law also provides authors with a limited version of moral rights in their works of visual art, usually granting authors the right of paternity and the right of integrity.⁷³ This means that the

⁶³ WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 37-40 (2003).

⁶⁴ *Id.* at 40.

⁶⁵ U.S. Const. art. I, §8, cl. 8.

⁶⁶ 17 U.S.C. § 102.

⁶⁷ 17 U.S.C. § 106(1).

⁶⁸ *Id.* § 106(2).

⁶⁹ *Id.* § 106(3).

⁷⁰ *Id.* § 106(4).

⁷¹ *Id.* § 106(5).

⁷² *Id.* § 106(6).

⁷³ *Id.* § 106A.

copyrighted works must be attributed to their authors and may not be distorted or mutilated in a manner that is prejudicial to the author. These exclusive rights are subject to a time limit and generally expire 70 years after the death of the author.⁷⁴ Copyrighted works can be transferred in different ways including by assignment and the grant of either exclusive or non-exclusive licenses.⁷⁵ Notably, the United States Copyright Office handles voluntary copyright registration, recording of copyright transfers, and other important tasks pertaining to copyright law.

Securitization of copyrights arguably advances the goals of copyright law by giving authors another avenue for recouping their investment. However, it is not a widespread practice applied to every work of authorship. As the discussion that follows clearly illustrates, it is a common practice only in the film and music industry and has been employed mainly in the cases of what is foreseen as promising and successful works of authorship.

The film and music industries recognized the benefits of securitizing the cash-flow coming from copyrights of cinematic and musical works. Future income streams from films come from ticket sales in theaters, sales of DVD versions, television broadcasts, international releases, and more. In 1995, film studios in the US began to securitize the copyrights of films they had produced, including blockbusters such as "Saving Private Ryan," "Jurassic Park 2," "Independence Day," and "The Matrix."⁷⁶ As a result of the securitization of intellectual property rights, the film studios attained benefits on numerous levels: accessibility to non-bank credit at a relatively low cost, raising interim funds that allow for relatively quick repayment of the high financial investment involved in producing the films, the transfer of some of the risks to the security holders, and the ability to consider the securitization off-balance sheet for accounting purposes.⁷⁷

In order to minimize the risk to investors in securities backed by cash flow from films, only films that have completed the production process are securitized. Most securitization transactions are conducted in a pre-release stage. However, there are some securitization transactions

⁷⁴ *Id.* § 302.

⁷⁵ *Id.* §§ 201-205.

⁷⁶ Jay H. Eisbruck, *Blockbuster or Flop? The History and Evolution of Film Receivables Securitization, 1995-2005*, 11 J. STRUCTURED FIN., no. 3, 11 (2005).

⁷⁷ Eisbruck, *supra* note 31, at 452; HAROLD L. VOGEL, ENTERTAINMENT INDUSTRY ECONOMICS: A GUIDE FOR FINANCIAL ANALYSIS 121 (8th ed., 2010).

done several weeks after films are released and even later – once the movies have proven their performance over a sustained period of two or three years. In the latter type of transaction, it is much easier to foresee the future cash-flow that the movies will produce, which significantly reduces the risk involved in the transaction.⁷⁸ Securitization of copyrights requires public notice and because the U.S. has a voluntary recording system of copyrights, it is a prerequisite to securitizing copyrights.

For the most part, securitization is done on an entire catalog of films belonging to a particular studio and selective securitization ("cherry picking") is not allowed. In other words, it is impossible to select the films from the catalog with the highest odds of success and to securitize only them.⁷⁹ This is done in order to prevent a situation in which the effective result of a securitization transaction would be leaving films with lower potential of success in the ownership of the studios, thereby endangering the studio's stability and ability to meet its obligations toward creditors.⁸⁰ Furthermore, securitization of a large number of films in one transaction improves the spread of risk and limits the dependence on the future performance of one particular movie.⁸¹

The music industry was not left behind and it, too, recognized the financing possibilities provided by the securitization market. David Bowie, the famous musician, was the pioneer in the field of securitization of royalty streams deriving from the intellectual property rights of musical works. In 1997, Bowie raised 55 million dollars through the issuance of bonds backed by anticipated royalties from the sale of his first 25 albums.⁸² The chief architect of the deal was David

⁷⁸ Eisbruck, *supra* note 31, at 452.

⁷⁹ Lupica, *supra* note 26, at 236-37 (discussing selective securitization).

⁸⁰ Lois R. Lupica, *Revised Article 9, Securitization Transactions and the Bankruptcy Dynamic*, 9 AM. BANKR. INST. L. REV. 287, 314-315 (2001) (discussing the risks to the stability of the originator who engages in selective securitization).

⁸¹ Eisbruck, *supra* note 31, at 455-56.

⁸² Adam Grant, *Ziggy Stardust Reborn: A Proposed Modification of the Bowie Bond*, 22 CARDOZO L. REV. 1291, 1291-1292 (2001).

Pullman, a financial and banking expert known for his creative securitization initiatives.⁸³

One of the unique characteristics of David Bowie's successful musical career – a characteristic that constituted a significant factor in his becoming the ideal originator in the intellectual property securitization market – is the fact that most of the copyrights to his musical works were completely in his possession before the securitization transaction.⁸⁴ In contrast to Bowie, who is considered a superstar in the musical world, second-and third-tier artists have less negotiating power with record labels and distributors and are therefore forced to give up significant portions of the rights to their musical works in the early stages of their careers.⁸⁵ The dispersal of copyrights among different parties throughout a musical career is likely to leave those artists without significant assets to securitize and thus hinder the feasibility of their using securitization as a tool for financing. Securitization of musical works does not necessarily require assignments of the rights or even transfer of the rights through exclusive licenses. It is sufficient that an asset is transferred to the originator, thereby allowing the work to be securitized. The existence of a variety of economic exclusive rights actually offers a greater set of securitization options, providing the author with the ability to securitize the income streams of different rights to different entities.

Before the securitization transaction, the data on the historical sales of David Bowie's albums were impressive – about a million albums were sold per year – and remained stable throughout his career, making future royalty incomes foreseeable.⁸⁶ Therefore, the bonds backed by the flow of funds from his musical works received the high credit rating of A3 by Moody's.⁸⁷ That said, in 2004, Moody's lowered the rating of the bonds following a lowering of the credit rating of the credit-enhancer of

⁸³ Aaron Elstein, *If It Moves, David Pullman Might Securitise It*, AM. BANKER, (Feb. 28, 1997, 02:00 AM), http://www.americanbanker.com/issues/162_39/-82696-1.html.

⁸⁴ Grant, *supra* note 82, at 1299-1300.

⁸⁵ Jennifer Burke Sylva, *Bowie Bonds Sold for Far More than a Song: The Securitization of Intellectual Property as a Super Charged Vehicle for High Technology Financing*, 15 SANTA CLARA COMPUTER & HIGH TECH. L.J. 195, 200-201 (1999).

⁸⁶ *Id.* at 204-205.

⁸⁷ Eisbruck, *supra* note 31, at 449.

the deal and due to a slowdown in the music industry.⁸⁸ However, by 2005, an impressive recovery was noted in sales, due to the development of online music purchasing services like Apple's iTunes Store. The changing positive trend in the music industry evoked a renewed interest in issuing securities backed by rights to musical compositions.⁸⁹

In the years following David Bowie's securitization transaction, additional artists, like the singer James Brown, the musical production team Ashford and Simpson, and the band The Isley Brothers issued securities backed by royalty streams coming from their musical works.⁹⁰ Recently, it was publicized that the SESAC company, which holds the musical copyrights of Bob Dylan, Neil Diamond, and other artists, is planning to raise 300 million dollars through the issuance of securities backed by royalties from songs penned by the artists.⁹¹ However, as of this writing, it was reported that the underwriter of the securitization deal, the investment company Goldman Sachs, has experienced difficulties in marketing the securities to investors in the capital market.⁹²

In sum, it seems that securitization of copyrights is a useful way for raising capital. However securitization is common mainly in the film

⁸⁸ *David Bowie's Bonds Hit Low Note*, BBC NEWS, (Mar. 23, 2004, 18:59), <http://news.bbc.co.uk/2/hi/entertainment/3561781.stm>

⁸⁹ Karen Richardson, *Bankers Hope For a Reprise Of 'Bowie Bonds'*, WALL ST. J., Aug. 23, 2005, available at http://online.wsj.com/public/article/SB112476043457720240-Tvpthd07S8mCqCxLFNKIPnWWY9g_20060823.html#articleTabs%3Darticle.

⁹⁰ *Id.* See also Roy Davies, *Who's Who in Bowie Bonds: The History of a Music Business Revolution*, (Jun. 5, 2007), <http://projects.exeter.ac.uk/RDavies/arian/bowiebonds.html>.

⁹¹ Liz Moyer & Al Yoon, *The Bonds, They Are A-Changin'*, WALL ST. J., Aug. 8, 2012, at C4, available at <http://online.wsj.com/article/SB10000872396390444246904577575551487651814.html>.

⁹² Tracy Alloway, *Goldman Rethinks Dylan Royalties Bond*, FIN. TIMES, Aug. 30, 2012, available at <http://www.ft.com/intl/cms/s/0/fc62398e-f1e5-11e1-bda3-00144feabdc0.html#axzz2606jPXxO>; Josephine Moulds, *Bond Investors See Another Side of Bob Dylan - But Desire isn't There*, THE GUARDIAN, Aug. 31, 2012, available at <http://www.theguardian.com/business/2012/aug/31/bob-dylan-bond-goldman-sachs>.

and music industries and only particular to successful works of authorships that guarantee income flows. In considering securitization of copyrights it is important to consider and realize the greater potential of securitization. In a way, securitization offers authors another avenue to exploit their works. Usually authors assign or offer exclusive licenses to their works in return for a certain consideration. Their ability to do so is typically limited by the market value of the work. At times, securitization can provide a better alternative than assignment or licensing. While the latter options might require long term commitments or an entire transfer of the copyright, securitization can be modeled in a way that is reversible to the right owner (the originator) and can offer a temporary transfer of the income streams in a way that corresponds with the needs of the author. By allowing authors to manage their own rights, this financing option can offer a better alternative than that of existing licensing schemes in which singers or bands transfer their rights entirely to the music industry.

However, it should be noted that securitization is not always an option. It is a useful tool for authors with negotiation power whose works' value can be determined to guarantee returns on investment. Naturally, it seems that the prevalent examples are those of prominent musicians or movies studios whose works of authorship are very valuable. This financing scheme is less viable for new authors who have no established reputation. Only after they establish a prominent name can they employ securitization as a means of financing. Furthermore, it seems that with works that have a smaller market the revenue flows are less significant and as a result it is unlikely it will be employed.

Additionally, to date, the existing examples of successful securitization only pertain to musical works and films rather than other types of original works of authorship. While it makes sense that securitization efforts have succeeded in such industries due to the income flows from royalties pertaining to different uses of musical and film works, consideration should be given to the expansion of securitization to other types of work. For instance, securitization can also be employed in situations where income is received from licensing other types of works such as different literary works (e.g., books and other widespread publications, software and other informational products). This model can be useful and workable for authors even in the internet environment and the digital electronic book environment.

2. Trademarks

Trademarks have become increasingly valuable in recent years and trademark owners are protecting their valuable assets with

increasing frequency by enforcing their rights against unauthorized infringing uses by third parties. A trademark is a symbol that identifies the source of a product.⁹³ According to the classic economic theory of trademark law, when trademark owners invest in trademarks they create reputation and goodwill that leads to greater profits from the sales of their goods and services. Trademark holders invest in trademarks by maintaining consistent characteristics and quality of their products and services and by advertising, which informs consumers about their products' availability and qualities. This, in turn, benefits consumers by saving them search costs because they can easily rely on familiar marks to find desirable goods and services. As a result, competition is enhanced because new market entrants will also have the incentive to invest in their marks and will try to attract new customers to their own goods by pointing to their own products' characteristics and qualities. Such market competition is arguably good because it can bring about lower prices and raise quality. Therefore, granting protection to trademarks is desirable from a societal perspective.⁹⁴

Traditionally, a trademark's value came about through its use in commerce. Without services or products to buy and sell under the trademark there was no value stemming from such mark and accordingly, no legal protection.⁹⁵ Thus, traditionally, ownership rights

⁹³ JANE C. GINSBURG, JESSICA LITMAN & MARY L. KEVLIN, *TRADEMARK AND UNFAIR COMPETITION LAW* 43 (4th ed. 2007).

⁹⁴ See generally Nicholas S. Economides, *The Economics of Trademarks*, 78 TRADEMARK REP. 523 (1988). See also LANDES & POSNER, *supra* note 63, at 167-68; William M. Landes & Richard A. Posner, *The Economics of Trademark Law*, 78 TRADEMARK REP. 267, 276-77 (1988); William M. Landes & Richard A. Posner, *Trademark Law: An Economic Perspective*, 30 J.L. & ECON. 265, 268-70 (1987). Because exclusive rights in trademarks support the investment in trademarks and in reputation, trademark rights create incentives for manufacturers to develop high quality goods. See Dan L. Burk, *Trademark Doctrines for Global Electronic Commerce*, 49 S.C. L. REV. 695, 696 (1998) (claiming that trademark protection enhances the quality of goods and services); Laura A. Heymann, *The Birth of the Authornym: Authorship, Pseudonymity, and Trademark Law*, 80 NOTRE DAME L. REV. 1377, 1414 (2005) ("The law grants protection to trademarks to ensure the reliability of these source indicators and, relatedly, to encourage companies to produce goods of consistent quality under a particular mark."); Hannibal Travis, *The Battle for Mindshare: The Emerging Consensus That the First Amendment Protects Corporate Criticism and Parody on the Internet*, 10 VA. J.L. & TECH. 3, 106 (2005) (arguing that trademark protection assures ability to exploit investment in consistently high product quality).

⁹⁵ See *The Trade-Mark Cases*, 100 U.S. 82 (1879) ("At common law the exclusive right to it grows out of its use, and not its mere adoption.").

in a trademark did not afford its owner complete property rights in the mark but rather with quasi-property rights. The courts in the United States have traditionally declared a trademark not property similar to real property: "A 'trademark' is not that which is infringed. What is infringed is the right of the public to be free of confusion and the synonymous right of a trademark owner to control his product's reputation."⁹⁶

However, during the last half of the twentieth century, the concept of the trademark, the scope of its legal protection, and value have all greatly evolved.⁹⁷ Trademarks in the twenty-first century stand not only for identification purposes but rather have come to represent lifestyle symbols and fill other roles and as a result they can be very valuable to their owners.⁹⁸ These changes and expansions can be nicely illustrated through the "APPLE" trademark example. When Steve Wozniak and Steve Jobs released the first APPLE computer in 1976, the APPLE trademark identified the "APPLE I" computer.⁹⁹ By 2012, the trademark "APPLE" has become a brand associated not only with computers, but with other "superior and well-integrated digital lifestyle and productivity solutions."¹⁰⁰ The APPLE trademark alone is valued at \$39.3 billion.¹⁰¹ The value of Apple's brand as a whole accounts for well over half of its valuation at \$153 billion.¹⁰²

⁹⁶ See *James Burrough, Ltd. v. Sign of Beefeater, Inc.*, 540 F.2d 266, 274, 276 (7th Cir. 1976).

⁹⁷ See Leah Chan Grinvald, *Shaming Trademark Bullies*, 2011 WIS. L. REV. 625, 632-33 (2011).

⁹⁸ See Rochelle Cooper Dreyfuss, *Expressive Genericity: Trademarks as Language in the Pepsi Generation*, 65 NOTRE DAME L.REV. 397 (1990) ("ideograms that once functioned solely as signals denoting the source, origin, and quality of goods, have become products in their own right, valued as indicators of the status, preferences, and aspirations of those who use them").

⁹⁹ See MARK RICHARDS & JOHN ALDERMAN, *CORE MEMORY 3* (2007).

¹⁰⁰ Apple, Inc., Annual Report 1 (Form 10-K) (Sep. 24, 2010). The term "brand" encompasses more than the trademark. While a trademark is a source-identifying symbol that assists consumers in purchasing the product they enjoyed previously (See LANDES & POSNER, *supra* note 63, at 167), a brand is the image and story of the company behind the trademarked product. See Deven R. Desai, *A Brand Theory of Trademark Law*, A Brand Theory of Trademark Law 1 (April 6, 2010). Thomas Jefferson School of Law Research Paper No. 1585327. Available at SSRN: <http://ssrn.com/abstract=1585327>.

¹⁰¹ See Press Release, *Apples Beats Microsoft for First Time and US Banks Slide in Updated 2011 Brand Finance Global 100*, available at <http://tech.fortune.cnn.com/2011/09/15/apples-brand-value-rises-to-no-2-in-the-world-after-google/>.

Along with the expansion in trademark value and meaning, trademark protection has similarly evolved towards greater expansion in legal rights for its owners.¹⁰³ These expansions can be seen in the broadening of the confusion standard along with the propertization of trademarks.¹⁰⁴ Traditionally, a trademark owner was entitled to protect her mark against misleading and unauthorized uses on products identical or similar to those sold under her trademark.¹⁰⁵ Most of the early American trademark cases clearly stated such requirement and in this manner provided limited protection to trademarks. In such cases, the requirement of a likelihood of confusion was grounded in the desire to protect trademark owners against unfair competition or the "passing off" of the plaintiff's product as the defendant's.¹⁰⁶ The defendant's trademark needed to be identical or confusingly similar to the plaintiff's and if the plaintiff's customers were not misled about defendant's product, then the law presumed that the plaintiff suffered no harm.¹⁰⁷

¹⁰² Apple, Inc., Annual Report (Form 10-K) (Consolidated Balance Sheets) (Sep. 24, 2011)(listing total shareholders' equity as \$76.6 billion); *but see* Millward Brown Optimor, BRANDZ TOP 100 MOST VALUABLE GLOBAL BRANDS: 2011, 5 (2011), available at <http://www.millwardbrown.com/BrandZ/Default.aspx> (listing Apple's valuation at \$153.3 billion). *See also* Jessica Litman, *Breakfast with Batman: The Public Interest in the Advertising Age*, 108 YALE L.J. 1717, 1727–28 (1999) ("Consumers have come to attach enormous value to trade symbols, and it is no longer uncommon to see the symbols valued far in excess of the worth of the underlying products they identify.").

¹⁰³ *See* Grinvald, *supra* note 97, at 632.

¹⁰⁴ Mark A. Lemley, *Romantic Authorship and the Rhetoric of Property*, 75 Tex. L. Rev. 873, 895 (1997) (suggesting that the propertization of intellectual property, including trademarks, was a modern trend); Mark P. McKenna, *The Normative Foundations of Trademark Law*, 82 NOTRE DAME L. REV. 1839, 1844 (2007)(arguing that trademarks in the Anglo-American tradition were considered to be property).

¹⁰⁵ *See, e.g.*, *Borden Ice Cream Co. v. Borden's Condensed Milk Co.*, 201 F. 510, 512–13 (7th Cir. 1912). This is perhaps due, in part, to the fact that most trademark owners only utilized their trademark in one product category. *See* Sara Stadler Nelson, *The Wages of Ubiquity in Trademark Law*, 88 IOWA L. REV. 731, 777 (2003) ("In 1927, the vast majority of trademarks identified only a single good, or, at most, a single class of goods.").

¹⁰⁶ *See* McKenna, *supra* note 104, at 1848.

¹⁰⁷ *See, e.g.*, *Levy v. Walker* (1878) 10 Ch.D. 436, 448 ("The Court interferes solely for the purpose of protecting the owner of a trade or business

More recently, however, trademark law has seen a broadening or elimination of the requirement of confusion. The United States has broadened the requirement of confusion. In 1962, the United States amended its federal trademark statute, the Lanham Act, to remove language that confusion was limited to source.¹⁰⁸ The likelihood of confusion standard currently includes not only confusion about the source of a product, but also sponsorship, affiliation, and association.¹⁰⁹ In addition, the U.S. Congress amended the Lanham Act in 1995 and again in 2006 to include dilution, which does not require a likelihood of confusion to be actionable, as a cause of action.¹¹⁰ Although dilution is limited to trademarks that are "famous," this does not stop large companies from claiming dilution as a cause of action.¹¹¹ This, in turn, caused the expansion of the reach of trademark protection as trademark owners argue that uses of trademarks similar to their own but in different product categories are confusing or dilutive.¹¹² Underlying this recent expansion in trademark protection is the growing legal treatment of

from a fraudulent invasion of that business by somebody else. It does not interfere to prevent the world outside from being misled into anything.”).

¹⁰⁸ The amendments in 1962 deleted the requirement that confusion be of “purchasers as to the source of origin of such goods or services.” See Act of Oct. 9, 1962, Pub. L. No. 87-772, § 2, 76 Stat. 769, 769.

¹⁰⁹ See 15 U.S.C. § 1125(a)(1)(A) (“likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person ...”). Furthermore, other theories of confusion, such as post-sale confusion and initial interest have made their way into the confusion doctrine. See Jeremy Sheff, *Veblen Brands*, 96 MINN. L. REV. 769 (2012)(post-sale confusion); Jennifer E. Rothman, *Initial Interest Confusion: Standing at the Crossroads of Trademark Law*, 27 CARDOZO L. REV. 105, 150-59 (2005)(initial interest confusion).

¹¹⁰ Congress passed the Federal Trademark Dilution Act in 1996, providing federal protection for famous marks from dilution. Federal Trademark Dilution Act of 1995, Pub. L. No. 104-98, § 3, 109 Stat. 985, 985 (1996). Congress amended this act in 2006. Trademark Dilution Revision Act of 2006, Pub. L. No. 109-312, § 2, 120 Stat. 1730, 1730.

¹¹¹ See 15 U.S.C. § 1125(c)(1) (“The owner of a famous mark shall be entitled ... to an injunction against another person’s commercial use in commerce of a mark or trade name, if such use begins after the mark has become famous and causes dilution of the distinctive quality of the mark...”).

¹¹² See, e.g., Benny Evangelista, *Monster Fiercely Protects Its Name: Cable Products Company Sues Those Who Use M-Word*, S.F. CHRON., Nov. 8, 2004, <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2004/11/08/BUG1J9N3C61.DTL>.

trademarks as closer to that of real property.¹¹³ The consequence of this "proPERTIZATION" of trademarks is that depending on the use of the registered trademark by the defendant, the trademark owner's property rights may be more likely to prevail over the defendant's right to free speech or other uses.

Trademarks are usually used exclusively in commerce by their owners. However, trademarks can be exploited in other ways such as licensing. A trademark license is usually an agreement between the owner and a licensee where the owner grants the licensee permission to use its trademark in commerce. A trademark license usually identifies the trademark, the parties to the license (owner and licensee), the trademark right or rights to be licensed, including the territory in which the marks are being licensed, and the nature and quality of the goods and services that the licensee may offer under the trademark. Usually the licensor has to exercise quality control over a licensee's goods and services because a trademark represents the trademark's owner reputation for goods and services of a certain level of quality and consumers tend to rely on this reputation in making purchasing decisions. If a licensor does not exercise sufficient control over the quality of the goods and services offered by the licensee, the trademark may become vulnerable to attack by the licensee or a third party. In the United States, for example, it may be deemed abandoned.¹¹⁴ Specifically, the licensor may specify the manner in which the trademark will be used in connection with the goods and services of the licensee and on advertising and promotional materials. A licensor may require access to a licensee's facilities, raw materials, finished products, and records to monitor the licensee's adherence to the licensor's quality standards.

Trademark licenses also commonly address the royalty rate of the license, the license term, whether it may be renewed for an additional period of time or terminated under certain circumstances, as well as the type of the license – whether it is exclusive to a single licensee or licensed non-exclusively to more than one licensee. In a non-exclusive licensing arrangement, the licensor retains the rights to use the trademark itself, to license it to others, or both. In the United States there

¹¹³ See Lemley, *supra* note 104, at 895; Glynn Lunney, *Trademark Monopolies*, 48 EMORY L.J. 367, 371 (1999).

¹¹⁴ 15 U.S.C. § 1127.

is no legal requirement to record trademark licenses with the United States Patent and Trademark Office.

Given the increasing economic value of trademarks, especially those associated with giant corporations, corporations have begun to exploit the commercial value of trademarks, including securitizing them. A few examples may be illustrative. Over the course of more than 40 years, Bill Blass gathered a reputation as a prominent fashion designer whose trademark decorated a wide variety of products. In 1999, Blass securitized the future revenue streams coming from his trademark. The securities backed by Bill Blass's trademark received a rating of Baa3 by Moody's, a significantly higher rating than the credit rating of Blass's fashion house.¹¹⁵ This is because the securitization created a division between the securitized assets and the rest of the originator's activities, meaning that the rating of the securities derived only from the quality of the trademark that backed it and not from a general risk of default by the fashion house. In the years that followed, other companies raised interim funds for their business operations through securitization of royalty streams deriving from their trademarks, such as the restaurant and fast food chains Arby's, Dunkin Donuts, Domino's Pizza, Sonic, Quizno's, Applebee's and IHOP, the Hilton chain of hotels, fashion houses Candie's and BCBGMAXAZARIA, the sneaker manufacturer Athlete's Foot and the retail chain Sears.¹¹⁶ These securitization transactions among others have turned trademarks into the most popular type of intellectual property for securitization.¹¹⁷

3. Patents

The idea behind the patent system is the classic incentive-to-invent story under which inventions are public goods because it is expensive to invent but very cheap to free ride and copy inventions. Therefore, rewarding inventors by providing them with a government monopoly for a limited time seems like a logical step to incentivize innovation. Patents, however, represent a departure from the norm of market competition by giving the patentee a legal right to prevent others from copying her ideas. Patent law is thus based in a utilitarian justification, suggesting that we need patents in order to incentivize

¹¹⁵ Eisbruck, *supra* note 31, at 448-9.

¹¹⁶ Kaufmann, *supra* note 34, at 241; Ariel Glasner, *Making Something Out of "Nothing" The Trend Towards Securitizing Intellectual Property and the Legal Obstacles That Remain*, 3 J. LEGAL TECH. RISK MGMT. 27, 37, 39-40 (2008).

¹¹⁷ See Glasner, *supra* note 116.

innovation. There have been a few theories of patent law based in reward, distributive justice, or moral right, but they are considered less powerful because they do not provide a satisfactory explanation of the scope of patent law. The growing economic literature on patent theory has developed five main approaches to the allocation and proper scope of patent rights. The first approach, the prospect theory developed by Edmond Kitch, is an ex-post theory that emphasizes the ability of intellectual property ownership to force the efficient management of inventions once they are made through licensing and is based on the approach of the "tragedy of the commons" and the hypothetical world of Ronald Coase where there are no transactions costs.¹¹⁸ Under this approach, a patent is not intended to operate as an incentive to invent but rather as a "prospect" system aimed to incentivize inventors to commercialize them further and use their inventions by patenting them and using them more efficiently. Under this approach, patents should be granted early in the invention process and should have very broad scope. In contrast, Kenneth Arrow introduced a theory of competitive innovation under which patent protection is needed only to create ex-ante incentives to innovate.¹¹⁹ He argued that competition, not monopoly, best spurs innovation because companies in competitive markets will innovate in order to avoid losing out to competitors, while patent monopolies will not have an incentive to innovate. A third approach voiced by a number of economists and legal scholars suggests that some innovation is cumulative, where a final product results from an initial invention and also from one or more improvements to it.¹²⁰ Robert Merges and Richard Nelson have offered a "tailored incentives" model which tries to allocate rights between initial inventors and subsequent improvers, supporting competition and the notions that "when it comes to invention and innovation, faster is better" and that "we are much better off with considerable rivalry in invention than with too little."¹²¹

¹¹⁸ See Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J. L. ECON. 265, 265 (1977).

¹¹⁹ See Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *The Rate and Direction of Inventive Activity* 609, 619-20 (Nat'l Bureau of Econ. Research ed., 1962).

¹²⁰ See Jerry R. Green & Suzanne Scotchmer, *On the Division of Profit in Sequential Innovation*, 26 RAND J. ECON. 20 (1995).

¹²¹ See Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 876-79 (1990).

The idea is that granting patents to both initial inventors and late improvers will bring about a balance of incentives. A more recent body of literature points out the limits of divided entitlements in circumstances in which transactions costs are positive. In the context of patent law, the literature suggests that too many companies have patents on components or inputs into products.¹²² The number of rights with different owners that must be aggregated in order to use certain technologies can create a problem for innovation and can be solved in different ways by consolidating ownership of rights to a few companies or one entity or by granting fewer patents. Finally, a closely related problem to the anti-commons problem is the problem of overlapping patents, which allows various patentees to lay claim to the same technologies or to different aspects of the same technologies. This overlap is termed "patent thicket" and it has the potential to prevent all parties from making a final product that incorporates multiple inventions.¹²³

The United States Constitution provides in Article 1, Section 8(8) that "the Congress shall have power... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."¹²⁴ Under the U.S. Patent Act, patent applications are filed with the United States Patent and Trademark Office where applications are examined. Patent protection is available to any product or process that meets specific threshold requirements: subject matter eligibility,¹²⁵ utility,¹²⁶ novelty,¹²⁷ non-obviousness,¹²⁸ enablement,¹²⁹ and other disclosure requirements.¹³⁰ A patent offers the patentee with a set of

¹²² See Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *SCI.* 698, 698-99 (1998).

¹²³ Carl Shapiro, *Navigating the Patent Thicket: Cross Licensing, Patent Pools, and Standard Setting*, in 1 *INNOVATION POL'Y AND THE ECON.* 119, 121 (Adam B. Jaffe et al., eds., 2001).

¹²⁴ U.S. Const. art. I, §8, cl. 8.

¹²⁵ 35 U.S.C. § 101.

¹²⁶ *Id.*

¹²⁷ *Id.* § 102.

¹²⁸ *Id.* § 103.

¹²⁹ *Id.* § 112.

¹³⁰ *Id.*

exclusive rights for 20 years from the filing date of the patent.¹³¹ Specifically, the patentee is given the right to exclude others from making, using, selling, offering for sale, exporting components to be assembled into an infringing device outside the U.S., importing the product of a patented process practiced outside the U.S., inducing others to infringe, as well as other defined categories of acts¹³²

A patentee generally employs a variety of means to generate revenue from her invention, such as, by commercializing her invention herself or by others;¹³³ by assigning her rights to others; or by licensing her invention by granting either an exclusive or non-exclusive licenses and by enforcing her rights against anyone infringing on her patent rights.¹³⁴ The patent also allows its owner to utilize it to raise credit. For example, the patent holder can offer the lender the right to the patent as a pledge toward ensuring repayment of a loan.¹³⁵ Thomas Alva Edison was the first to utilize his patent rights to obtain financing. Over a century ago, Edison registered a lien on the patent for incandescent bulbs as collateral toward repayment of the loan he took in order to start the company that would later become the corporate giant General Electric.¹³⁶

Unsurprisingly, among the different types of intellectual property, it is the patentees that face the greatest challenges in exploiting their patents and commercializing their inventions. It appears that many valuable inventions do not get commercialized.¹³⁷ Additionally,

¹³¹ *Id.* § 154(a)(2).

¹³² *Id.* § 154(a)(1).

¹³³ *Id.* § 261.

¹³⁴ *Id.* § 154.

¹³⁵ Xuan-Thao Nguyen, *Collateralizing Intellectual Property*, 42 GA. L. REV. 1, 16-19 (2007).

¹³⁶ Shawn K. Baldwin, "To Promote the Progress of Science and Useful Arts": A Role for Federal Regulation of Intellectual Property as Collateral, 143 PA. L. REV. 1701, 1701 (1995).

¹³⁷ See Roger L. Beck, *Competition for Patent Monopolies*, 3 RES. L. & ECON. 91, 98 (1981) (noting that about 40-50% of patents are never commercialized); Eugene Mattes et al., *Surveying Inventors Listed on Patents to Investigate Determinants of Innovation*, 69 SCIENTOMETRICS 475, 483 (2006) (examining most of the studies on patent commercialization and reporting that

empirical studies show that even when inventions are proven to be valuable it can even take up to decades to successfully commercialize them. And indeed, significantly less than half of all patented product inventions are commercialized. Additionally, patentees fail to renew their patents and pay maintenance fees on more than 60% of patents within 12 years after issuance.¹³⁸ Because it seems reasonable that viable products will likely survive for more than 12 years in many industries, these low renewal rates also suggest that most inventions are never commercialized.¹³⁹

In fact, many patents today are not used as devices for earning profits on commercial products of the patents, but instead are used for other purposes such as: (1) to defend against patent infringement lawsuits; (2) as bargaining tools in large cross-licensing deals; and (3) to create greater fences around commercialized products in order to prevent others from designing around the patented invention and selling

the “range for granted patents becoming innovations [i.e., commercial products or processes] is somewhere between 43% and 54%”); Robert P. Morgan et al., *Patenting and Invention Activity of U.S. Scientists and Engineers in the Academic Sector: Comparisons with Industry*, 26 J. TECH. TRANSFER 173, 178 & tbl.2 (2001) (reporting a 48.9% private-sector commercialization rate based on data from a 1995 National Science Foundation survey); Kazuyuki Motohashi, *Licensing or Not Licensing? An Empirical Analysis of the Strategic Use of Patents by Japanese Firms*, 37 RES. POL'Y 1548, 1550 (2008) (reporting an average patent utilization rate of 51% for over 5000 Japanese respondent firms, research organizations, and inventors); Roger Svensson, *Commercialization of Patents and External Financing During the R & D Phase*, 36 RES. POL'Y 1052, 1057-58 (2007) (reporting a 61% commercialization rate for a sample of Swedish patents held by individuals, micro-companies, and small and medium-sized firms).

But see Rebecca S. Eisenberg, *Patents and the Progress of Science: Exclusive Rights and Experimental Use*, 56 U. CHI. L. REV. 1017, 1042 n.108 (1989) (“Barkev Sanders, in a study of assigned patents issued in 1938, 1948, and 1952, found that . . . 10 percent of patented inventions [are] ever put to commercial use . . .”).

¹³⁸ Nearly 20% of all patents are not renewed four years after issuance; more than 40%, eight years after issuance; and more than 60%, twelve years after issuance. Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1504 (2001); *see also* Kimberly A. Moore, *Worthless Patents*, 20 BERKELEY TECH. L. J. 1521, 1530-36 (2005).

¹³⁹ *See* Peter N. Golder & Gerard J. Tellis, *Growing, Growing, Gone: Cascades, Diffusion, and Turning Points in the Product Life Cycle*, 23 MARKETING SCI. 207, 208, 216 (2004) (finding that the median product duration until decline was twenty years).

substitute products.¹⁴⁰ Interestingly, empirical evidence also suggests that there is a very low rate of licensing and enforcement of patents, suggesting that patents are not commercialized extensively. About only 5% of issued patents are licensed for a royalty.¹⁴¹ Moreover, less than 2% of issued patents are ever involved in litigation and 50% of those cases settle within 15 months of being filed.¹⁴² It can be argued that this data suggests that “most [patented] technologies will not be economically viable or commercially successful.”¹⁴³ However, there exist very few studies that suggest that many uncommercialized inventions would be successful even if they were to get commercialized. The British Technology Group, a company that specializes in commercializing and licensing medical innovations, conducted a survey in 1997 of 20 universities and 133 companies worldwide about their use of patents.¹⁴⁴ About 40% of the patents owned by the respondents were never commercialized.¹⁴⁵ However, universities reported that 40% of their uncommercialized patents were “very important” or “quite

¹⁴⁰ See FED. TRADE COMM'S, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY ch. 2, at 26-27, 33 (2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>; Rosemarie Ham Ziedonis, *Don't Fence Me In: Fragmented Markets for Technology and the Patent Acquisition Strategies of Firms*, 50 MGMT. SCI. 804 (2004) (discussing the strategy of patent fencing); Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 26-27 (2005); Bronwyn H. Hall & Rosemarie Ham Ziedonis, *The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry, 1979-1995*, 32 RAND J. ECON. 101 (2001) (finding that in the semiconductor industry during the period studied the major reason for patenting was strategic cross-licensing).

¹⁴¹ Lemley, *supra* note 138, at 1507; see also Michael Abramowicz, *The Danger of Underdeveloped Patent Prospects*, 92 CORNELL L. REV. 1065, 1074 (2007) (“[M]any patents go unlicensed and thus appear to be worthless.”).

¹⁴² Lemley, *supra* note 138, at 1501; Paul Janicke, Univ. of Houston Law Ctr., *Patent Litigation Remedies: Some Statistical Observations* 25 (Feb. 10, 2007), available at http://www.patentsmatter.com/issue/Patent_Litigation_Remedies-Janicke.ppt.

¹⁴³ See Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L. J. 577, 603 (1999).

¹⁴⁴ See British Technology Group, *IPR Market Benchmark: Summary Report of Findings* 3 (1999).

¹⁴⁵ See *id.* at 13, 18.

important.”¹⁴⁶ Private companies stated that 32% of their uncommercialized patents were either “quite important” or “very important.”¹⁴⁷ For specific industries the importance rate of the patents was even higher. For engineering companies the figure increased to 40% and for pharmaceutical and biosciences companies it increased to 34%.¹⁴⁸ Moreover, about 40% of the private companies stated they would like to license out their uncommercialized patents to third parties.¹⁴⁹ Only 33% of respondents who did not view licensing out as “attractive” said their uncommercialized inventions were of “minimal” or “no” value.¹⁵⁰ Finally, in a survey funded by the European Commission that generated responses from over 9000 European inventors nearly 38% of the patents were uncommercialized by themselves or others.¹⁵¹

Thus, it seems that many patents go uncommercialized regardless of their quality. It probably mainly has to do with the ability of the company to raise capital for the development of working prototypes. Indeed, raising capital is one of the biggest hurdles companies face on their way to full commercialization of a patented invention. This is especially the case with small companies that face the greatest challenges in patenting and bringing their inventions to market. One of the most serious attempts to explore entrepreneurial patenting was undertaken by the 2008 Berkeley Patent Survey, which explored American entrepreneurial companies and the patent system. The survey was designed to understand how patenting, patent licensing, and patent litigation relate to company innovation, capital formation, business strategies, competition, and other forms of IP protection.¹⁵² One of the main goals of the survey was to understand what motivates invention and innovation among start-ups.¹⁵³ The survey also took into account the

¹⁴⁶ *See id.*

¹⁴⁷ *See id.*

¹⁴⁸ *See id.*

¹⁴⁹ *See id.* at 21.

¹⁵⁰ *Id.* at 22.

¹⁵¹ *See* ALFONSO GAMBARDELLA ET AL., THE VALUE OF EUROPEAN PATENTS: EVIDENCE FROM A SURVEY OF EUROPEAN INVENTORS 39, 39-40 (2005), available at <http://www.alfonsogambardella.it/PATVALFinalReport.pdf>.

¹⁵² Stuart J.H. Graham & Ted Sichelman, *Why Do Start-Ups Patent?* 23 BERKELEY TECH. L. J. 1063, 1091 (2008).

¹⁵³ *Id.* at 1091-2.

respondent companies' characteristics (background, business profile, business model, and innovation focus).¹⁵⁴ The findings show that patents are most useful in market competition in the biotechnology and hardware sectors and least useful in software companies.¹⁵⁵ Patenting among entrepreneurs seems to be mostly motivated by the desire to prevent copying by others.¹⁵⁶ However, in descending order of importance, the other motives for seeking a patent are: (a) improving chances of securing investments; (b) improving chances and quality of a liquidity event; and (c) enhancing the company's reputation and product image. The next important group of reasons is to prevent infringement lawsuits and to improve bargaining power. Filing patent applications in order to earn licensing revenue was the least important reason for all respondents.¹⁵⁷ However, some evidence shows that the smaller startups are more reliant on patents for license revenue than the larger firms.¹⁵⁸ There are also differences between the various industries' prioritization of the different potential motivations for patenting. For example, when compared with the software firms, the biotech and medical device industries place higher importance on preventing copying, securing investments, and improving liquidity.¹⁵⁹ Meanwhile, when compared with other startups, biotech startups place a much higher importance on the need to generate licensing revenue.¹⁶⁰ Last, and importantly, the study found that the high costs of patenting are most often a barrier that prevents start-ups from seeking protection.¹⁶¹

In addition, surveys and interviews reveal patenting to be a more important than previously thought tactic that startups use to acquire

¹⁵⁴ *Id.* at 1093.

¹⁵⁵ Sichelman & Graham, *supra* note 4, at 158.

¹⁵⁶ *Id.* at 153.

¹⁵⁷ *Id.* at 154.

¹⁵⁸ *Id.* at 163-4.

¹⁵⁹ *Id.* at 158-9.

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 166-7.

capital.¹⁶² Various explanations are given as to what patent-holding signals to potential investors that make them more comfortable investing, but it was noted that venture capital investors had indicated that a patent portfolio was important in their decision of whether to invest in a company.¹⁶³ It was also reported to be a strong factor among “friends and family” investors and even banks.¹⁶⁴ There are similarly industry-related differences in the reported significance of patents to investors, with biotech investors placing more emphasis on patent portfolios than software startup investors.¹⁶⁵

In sum, it seems that patenting is a key element in securing financing for the company. Raising capital seems easier where companies hold patent portfolios. Furthermore, it seems that companies face major challenges commercializing their inventions even after they patent them and regardless of the promise of the invention. Therefore, offering additional avenues for raising capital is critical for patentees.

With the development of advanced financial tools, the ability to securitize royalty streams stemming from patents broadens the horizons for new possibilities for intellectual property owners in the 21st century and can even serve to overcome the barrier of high-cost. Traditionally, inventors must go through lengthy and complex steps in order to realize the monetary potential of the invention. Patent securitization allows the inventor at a relatively early stage to realize the commercial potential of her invention and to generate immediate income on account of future income flow deriving from the invention. Since the development of an invention typically involves very high initial costs in research and development followed by the expenses involved in the patenting process and then, at the more advanced stages, the production costs of the finished product and costs of penetrating the market, the ability to raise interim funds through securitization is essential to originators in the field of innovation.¹⁶⁶ The use of securitization as a tool for funding allows for the bridging of significant financing gaps between the earlier stages

¹⁶² Stuart J.H. Graham, et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 BERKELEY TECH. L. J. 1255, 1306 (2009).

¹⁶³ *Id.* at 1307.

¹⁶⁴ *Id.*

¹⁶⁵ *Id.* at 1308.

¹⁶⁶ Aleksandar Nikolic, *Securitization of Patents and its Continued Viability in Light of the Current Economic Conditions*, 19 ALB. L. J. SCI. & TECH. 393, 409 (2009).

of the idea underlying the invention and the later stage of the finished product based on the patent.¹⁶⁷

Beginning in the year 2000, research institutions, such as Yale and Emory Universities, and pharmaceutical companies, securitized the flow of royalties coming from drug patents they had developed.¹⁶⁸ Nonetheless, it seems that the development of the securitization market for patents lags behind the securitization markets for other intellectual property rights – copyrights and trademarks – both because of hesitation of the investors to contend with the relatively complex field and because of a lack of awareness on the part of companies regarding the potential economic benefits of securitization of their patents.¹⁶⁹

IV. BENEFITS OF INTELLECTUAL PROPERTY SECURITIZATION

Economic and legal literature often attributes an improvement in the efficiency of the capital market and the activities of the various players to the use of securitization.¹⁷⁰ One scholar even compared the activity of securitization to a type of alchemy that turns base metals into gold.¹⁷¹ In this chapter we will further expand on and analyze the benefits of securitization of intellectual property rights in general from the perspective of the holders of those rights, that is, the originators, who wish to obtain credit for their business activities, from the perspective of investors in the capital market, as well as from the perspective of the public interest in the expansion and diversification of the fields of creativity and innovation.

1. Access to Non-Bank Credit

The securitization market constitutes an alternative to bank credit. A bank's lending is limited by the amount of its own capital. To protect depositors and promote the stability and efficiency of the financial system, banks are required to maintain a minimum capital adequacy

¹⁶⁷ Ted. M. Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341 (2010).

¹⁶⁸ MICHAEL A. GOLLIN, DRIVING INNOVATION: INTELLECTUAL PROPERTY STRATEGIES FOR A DYNAMIC WORLD, 323-4 (2008).

¹⁶⁹ Nikolic, *supra* note 166, at 412-13.

¹⁷⁰ Shenker & Colletta, *supra* note 41, at 1371.

¹⁷¹ Schwarcz, *supra* note 3, at 134.

ratio (CAR).¹⁷² When a bank's capital approaches the minimum capital requirement level, its ability to provide credit is limited. Moreover, banks supervisors around the world set limitations on the indebtedness of a borrower and a group of borrowers in order to protect the safety and soundness of banks and to promote diversification of loans and equitable access to banking services.¹⁷³ Due to these limitations on lending to a single borrower or a group of borrowers, bank credit is not always available to originators. In these cases, the possibility of obtaining non-bank credit through securitization constitutes a safe haven from the credit shortage. Even when bank credit is available, the existence of the securitization market broadens the variety of financing sources available to the business sector and therefore increases the accessibility of originators to credit and reduces the costs of funding.

2. Lowering Financing Costs

The use of securitization in intellectual property is meant to significantly reduce the costs of financing for owners of intellectual property rights.¹⁷⁴ Raising credit through issuing asset-backed securities is based on the isolation of the intellectual property rights that back the securities from the rest of the assets of the originator such that the cost of financing is affected only by the quality of the securitized assets and not by the bankruptcy risk of the originator.¹⁷⁵ Originators who struggle to raise credit cheaply in traditional ways, such as through bank loans or issuing corporate bonds, are able to utilize quality intellectual property rights in their possession to that end. Securitization of intellectual property rights allows originators to raise credit relatively cheaply, since the level of interest that investors demand for investment in asset-backed securities derives only from the characteristics and quality of the intellectual property rights backing the securities and is not dependent on the risks involved in the overall business activities of the originator. Therefore, the use of securitization as a means of financing generally allows the owners of the intellectual property rights to reduce the cost of raising credit.

¹⁷² See *supra* note 21 and accompanying text.

¹⁷³ See *supra* note 22 and accompanying text.

¹⁷⁴ Kaufmann, *supra* note 34, at 241-242.

¹⁷⁵ See *supra* references in notes 19-20.

3. Off-Balance Sheet Financing

According to accounting principles, a secured loan should appear as a liability on the balance sheet of the borrowing company. In contrast, obtaining credit through securitization is considered off-balance sheet financing since, from an accounting perspective, the securitization replaces one type of asset, future royalty streams, with a different type of asset, liquid money. Off-balance sheet financing is attractive for the originator since it does not increase its debt-to-equity ratio and as a result has no negative impact on the originator's creditworthiness.¹⁷⁶

4. Maintaining Ownership Rights to the Originator

An originator who securitizes royalty income streams from intellectual property rights is not separated from her rights; rather, the royalty income streams revert to her possession when the asset-backed securities are fully repaid.¹⁷⁷ For example, in the securitization transaction carried out by the singer David Bowie, it was determined that the royalty income streams would return to his possession upon complete repayment of the bonds backed by the royalty streams of his music.¹⁷⁸ It seems that the advantage of the maintenance of ownership rights in the hands of the originator is especially significant in the world of intellectual property because it allows the originator to use her intellectual property rights while licensing parts of its rights to others on a variety of different terms.

5. Diversification of Investment Tools

From the perspective of the investment community, the securitization of intellectual property rights increases the welfare of the capital market by diversifying investment tools.¹⁷⁹ The creation of new investment channels in the capital market – investment in securities backed by intellectual property rights – allows for diversification of

¹⁷⁶ Glasner, *supra* note 116, at 33. However, it is possible that this accounting advantage might be eliminated following the adoption of two financial reporting rules-IFRS 12 AND IFRS 10- which require the disclosure of holdings in other entities.

¹⁷⁷ Grant, *supra* note 82, at 1297.

¹⁷⁸ Sylva, *supra* note 85, at 204.

¹⁷⁹ 1 FRANKEL, *supra* note 20, at 167.

investments.¹⁸⁰ The ability of investors to diversify away risk is even more striking in the case of a multi-seller securitization conduit type of securitization in which securities are backed by a large and diverse pool of intellectual property rights that were securitized from different sources.

Moreover, the advancement of computing methods has allowed for the development of sophisticated financial products in the securitization market that actually derive from the underlying cash flow coming from the securitized assets themselves. In a process of financial engineering, the royalty flow coming from the intellectual property rights is divided into sub-streams, each of which is issued against a specific series of asset-backed securities. For example, it is possible to divide the royalty stream coming from intellectual property rights into two series of asset-backed securities with different maturities, where the first includes the royalties from the early years and the second includes the royalties from the later years. The return on each series of securities reflects the level of risk and value for that duration of time. In fact, at today's computing level, there is no limit on the ability to split the royalty stream coming from the intellectual property rights into sub-streams and the divisions may be as complex as desired.

This division into sub-streams allows the creation of a diverse series of securities that can satisfy the needs and preferences of different types of investors.¹⁸¹ For example, different maturities appeal to different investors: long term securities appeal to pension funds, while short term securities appeal to more impatient investors such as commercial banks. The existence of securities with different parameters affords investors the ability to choose the level of risk and expected return on their investments. The securitization market therefore increases the coordination between potential investment channels in the capital market and the specific preferences of the capital market's investors. Moreover, the division into different series of intellectual property-backed securities creates added value over and above direct investment in intellectual property rights. By providing the specific desired level of risk and expected return for each type of investor, the aggregate value created by the securitization transaction increases. The ability to coordinate the characteristics of the different series of securities issued in accordance with the diverse preferences of the investors allows for a compounding of the return on the overall transaction. In other words, the

¹⁸⁰ Ellis, *supra* note 20, at 301.

¹⁸¹ Michael H. Schill, *Uniformity or Diversity: Residential Real Estate Finance Law in the 1990s and the Implications of Changing Financial Markets*, 64 S. CAL. L. REV. 1261, 1270 (1991).

financial engineering process leads to the sum of parts being greater than the whole itself.¹⁸²

6. Removal of Barriers to Entry in Investment in Intellectual Property

Investment in the intellectual property world – for example, through venture capital funds that invest in high-tech startups – involves a complex process of due diligence, lengthy negotiations between the parties, high transaction costs, and much risk.¹⁸³ These factors create serious barriers to entry for investment in the field. The securitization process, which turns illiquid intellectual property assets into asset-backed securities that are regularly traded in financial markets, removes a portion of the barriers.¹⁸⁴ First, the purchase of intellectual property backed-securities allows smaller investors the opportunity to invest in the intellectual property world without requiring large amounts of money. Since the securities are backed by a large pool of intellectual property rights, smaller investors are able to benefit from investments' diversification despite their relatively low level of investment.¹⁸⁵ Second, the rating of intellectual property-backed securities by credit rating agencies allows investors to make intelligent investment decisions without requiring them to have personal knowledge or special expertise.¹⁸⁶ Credit ratings increase the transparency of the information in the market, significantly lower the cost of investment in the intellectual property field, and allow even unsophisticated investors to take part in the investment. The securitization market therefore increases the accessibility of investors to intellectual property investments and removes barriers to entry for investment in the field.¹⁸⁷

¹⁸² Shenker & Colletta, *supra* note 41, at 1428.

¹⁸³ Fernandez, Stein & Lo, *supra* note 28 (discussing the advantages of employing securitization in biomedical research compared to other traditional venture capital financing).

¹⁸⁴ GOLLIN, *supra* note 168, at 324-25.

¹⁸⁵ Edward J. Janger, *The Death of Secured Lending*, 25 CARDOZO L. REV. 1759, 1769-1770 (2004).

¹⁸⁶ Shenker & Colletta, *supra* note 41, at 1401-1402.

¹⁸⁷ Jonathan Remy Nash, *Environmental Superliens and the Problem of Mortgage-Backed Securitization*, 59 WASH. & LEE L. REV. 127, 141-142 (2002) (discussing the impact of mortgages' securitization on the barriers to entry to the real estate investment market).

7. Supporting Investment in Research, Development and Creativity

The securitization market of intellectual property rights serves the public interest by supporting development of new inventions and creative works, such as pharmaceuticals, advanced computer software, and cinematic and musical works. The ability to actualize intellectual property rights easily and generate quick income from them through securitization incentivizes investment in research, development, and creativity. Moreover, the liquid capital raised in securitization transactions may be invested in research, development, and designs that can further yield new innovation.¹⁸⁸ These newly created intellectual property rights can be securitized in turn, thus promoting the public interest of expansion and diversification of the creativity and innovation sector.

V. CHALLENGES TO THE INTELLECTUAL PROPERTY SECURITIZATION MARKET

1. Overview

Since the beginning of the third millennium, asset securitization has been challenged by two serious economic crises: the collapse of the corporate giant Enron in 2001 and the global credit crisis of 2008. Enron, at the time the seventh largest corporation in the United States, unexpectedly collapsed following the revelation of its accounting fraud, which was intended to misrepresent profits and hide losses.¹⁸⁹ The investigation into Enron's collapse revealed that the company had made use of many hundreds of special purpose vehicles and off-balance sheet practices to conceal its liabilities from public scrutiny.¹⁹⁰ Enron had routinely created such entities for the purpose of conducting transactions that were then intentionally misclassified and misrepresented in its financial reports. The problematic financial practices that came to light in the Enron scandal stoked the fear of improper use of special purpose vehicles in the securitization process.¹⁹¹ Indeed, the huge public outcry

¹⁸⁸ GOLLIN, *supra* note 168, at 325; Nikolic, *supra* note 166, at 409.

¹⁸⁹ For the story of Enron *see* LOREN FOX, ENRON: THE RISE AND FALL (2003).

¹⁹⁰ *See In re Enron Corp. Sec., Derivative & ERISA Litigation*, 235 F. Supp. 2d 549, 610 (S.D. Tex. 2002).

¹⁹¹ *See Janger, supra* note 185, at 1773. For an approach that looks at the substantive differences between Enron's manipulative use of SPVs and their

that followed the Enron fiasco led Congress, in early 2002, to call a last-minute halt to federal legislation that had been designed to promote financial activity resembling what was exposed in the Enron affair and whose implementation would have enable originators and special purpose vehicles to misrepresent their securitization transactions to third parties.¹⁹² Moreover, with the goal of restoring investor confidence in the capital markets, the Sarbanes-Oxley Act of 2002 set new stringent reporting requirements for corporate financial reports, including arrangements for the use of special purpose vehicles and off-balance sheet transactions.¹⁹³

Furthermore, in the past few years, global financial markets have experienced a crisis. In academic and popular discourse it is common to ascribe a central role in the economic crisis to securitization.¹⁹⁴ The main criticism of the securitization mechanism

conventional use in the securitization market, *see* Steven L. Schwarcz, *Enron and the Use and Abuse of Special Purpose Entities in Corporate Structures*, 70 U. CIN. L. REV. 1309, 1314-18 (2002).

¹⁹² Bankruptcy Abuse Prevention & Consumer Protection Act of 2001, S. 220, 107th Cong. § 912 (2001), H.R. 333, 107th Cong. § 912 (2001). On the one hand section 912 of the proposed bankruptcy reform bill would enable originators to conceal some of the obligations they had undertaken through misrepresentation of securitization transactions, [while on the other hand restricting courts' authority to reclassify the transactions and restore securitized assets to a debtor originator's estate. *See* Letter from Allan Axelrod et al., law school deans and professors, to Senator Patrick Leahy & Congressman F. James Sensenbrenner (Jan. 23, 2002), *reprinted in Law School Deans, Professors Ask Congress to Reconsider Securitization Provision*, AM BANKR. INST. J., Mar. 2002, at 6; Kettering, *supra* note 11, at 1652-53; Jonathan C. Lipson, *Enron, Asset Securitization and Bankruptcy Reform: Dead or Dormant?*, 11 J. BANKR. L. & PRAC. 101, 109-10, 113 (2002); Stephen J. Lubben, *Beyond True Sales: Securitization and Chapter 11*, 1 N.Y.U. J.L. & BUS. 89, 101 (2004).

¹⁹³ Sarbanes-Oxley Act of 2002, Pub. L. 107-204, 116 Stat. 745 (codified in scattered sections of 11, 15, 18, 28, 29 U.S.C.). Section 401(c) of the Sarbanes-Oxley Act required the Securities and Exchange Commission to study and report on the extent of usage of off-balance transactions and whether accounting principles adequately addressed these transactions. *See* U.S. Securities and Exchange Commission, Report and Recommendations Pursuant to Section 401(c) of the Sarbanes-Oxley Act of 2002 On Arrangements with Off-Balance Sheet Implications, Special Purpose Entities, and Transparency of Filings by Issuers (June 15, 2005) <http://www.sec.gov/news/studies/soxoffbalancertpt.pdf>.

¹⁹⁴ *See, e.g.,* John D. Martin, *A Primer on the Role of Securitization in the Credit Market Crisis of 2007*, in LESSONS FROM THE FINANCIAL CRISIS: CAUSES, CONSEQUENCES, AND OUR ECONOMIC FUTURE 199 (Robert W. Kolb

focuses on the disconnect it creates between the originator and the securitized assets in a way that, from the outset, lowers the incentive of the originator to be conscientious about the quality of the assets.¹⁹⁵ The claim is that securitization allows the originator to exploit the information gap between herself and the investors in order to pass on the hidden risks in the securitized assets to others without the risks being fully accounted for in the price. The difficulty in assessing the default risk and pricing is attributed to the financial engineering processes, which created complex derivative securities disassociated from the risks inherent in the original assets backing them. A striking expression of the inability of third parties to assess default risks can be seen in the collapse of the market of securities backed by sub-prime mortgages at the end of 2007 and the subsequent global credit crisis.

Criticisms of the securitization mechanism did not spare the role of the credit rating agencies and stressed the limits of rating technologies in assessing the complex financial instruments created in the securitization process.¹⁹⁶ The crisis made the lack of transparency in the rating process and the delayed response of the credit rating agencies to events that should have lowered ratings abundantly clear. Furthermore, researchers recognized failures in the independence of the rating companies and pointed to distortions in their incentive structures and the conflicts of interest they created.¹⁹⁷ Indeed, in response to the

ed., 2010) (discussing the role of securitization in the 2007-2008 global economic crisis); TIMOTHY F. GEITHNER, FIN. STABILITY OVERSIGHT COUNSEL, MACROECONOMIC EFFECTS OF RISK RETENTION REQUIREMENTS 10-14 (2011), available at [http://www.treasury.gov/initiatives/wsr/Documents/Section%20946%20Risk%20Retention%20Study%20%20\(FINAL\).pdf](http://www.treasury.gov/initiatives/wsr/Documents/Section%20946%20Risk%20Retention%20Study%20%20(FINAL).pdf) (discussing the role of securitization in the economic crisis); Gary Gorton & Andrew Metrick, *Securitization*, in 2A THE HANDBOOK OF THE ECONOMICS OF FINANCE I (George Constantinides et al. eds., 2012) (arguing that securitization played a major role in the global economic crisis and explaining the reasons for that); Dov Solomon, *The Rise of a Giant: Securitization and the Global Financial Crisis*, 49 AM. BUS. L. J. 859 (2012) (arguing that the rapid growth of the securitization market was a primary factor in the 2008 global financial crisis and analyzing the distorted incentives for asset securitization that led to its excessive use, even when economically inefficient).

¹⁹⁵ Securitization of mortgages allows borrowers not to undertake the risks inherent in the mortgages they took but to pass them on to the holders of assets-backed securities. As a result, with the growth of the secondary market of mortgages in the United States, banks offered better and more flexible terms to lenders. See Solomon & Minnes, *supra* note 14, at 541-45.

¹⁹⁶ Joshua Coval, Jakub Jurek & Erik Stafford, *The Economics of Structured Finance*, 23 J. ECON. PERSP. no. 1, 2009, at 3.

¹⁹⁷ Patrick Bolton, Xavier Freixas & Joel Shapiro, *The Credit Ratings Game*, 67 J. FIN. 85 (2012).

failures in credit rating found in the course of the crisis, in July 2010, the US Congress was required to regulate the field of credit rating as a part of the comprehensive financial reform, the Dodd-Frank Act.¹⁹⁸ It should be noted that most of the criticisms of securitization were directed at the failures that were discovered in the particular assets that stood at the center of the crisis, namely, in the sub-prime mortgage market in the United States. Since the failures found in the course of the crisis are not related to the area of intellectual property,¹⁹⁹ it is widely believed that intellectual property rights will continue to be used as an acceptable tool of raising credit, especially in an age when they are becoming a significant component in the economies of developed countries.²⁰⁰ However, in the next paragraphs we point to obstacles that stand in the way of continued development of the securitization market for intellectual property and we attempt to offer effective solutions to overcoming them.

2. Securitization of Intellectual Property Rights

The securitization of intellectual property is not always feasible for many reasons. The discussion that follows highlights these reasons, touching upon the challenges that intellectual property securitization pose and discussing inherent problems with the asset to be securitized (intangible goods), the challenges of intellectual property valuation, domestic and global protection and enforcement schemes, and more.

Unlike other assets used as the basis for securitization transactions – such as municipal taxes – where the cash flow coming from them is considered relatively stable and foreseeable, the flow of royalties deriving from intellectual property rights is characterized by high volatility. The reason for this is that the value of intellectual

¹⁹⁸ Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, Title IX, Subtitle C, 124 Stat. 1376, 1872-90 (2010).

¹⁹⁹ Kaufmann et al. *supra* note 34, at 249 (emphasize that the reason for the sub-prime crisis is the securitization of sub-prime mortgages, i.e., the low quality of the housing loans that were securitized and suggest that in the field of intellectual property securitization there have been no hurdles). Additional studies have shown that the challenges in the field mortgages' securitization are atypical to other securitized assets. See Efraim Benmelech et al., *Securitization without Adverse Selection: The Case of CLOs*, 106 J. FIN. ECON. 91 (2012).

²⁰⁰ Brian W. Jacobs, *Using Intellectual Property to Secure Financing after the Worst Financial Crisis Since the Great Depression*, 15 MARQ. INTELL. PROP. L. REV. 449, 461-463 (2011).

property rights may be sharply affected by changes in the tastes or preferences of the general public, fads, or by technological changes. This adds dimensions of complexity and risk to securitization transactions in the intellectual property field and makes pricing the transactions difficult.²⁰¹ Additionally, all intellectual property rights can be challenged and invalidated based on different grounds. For example, patents are presumed to be valid. However, they can be invalidated based on different grounds such as lack of novelty, obviousness, disclosure problems and other reasons. Indeed, nearly half of all litigated patents are held invalid. Similarly, trademarks may be challenged based on different grounds such as an argument that the trademark has become generic. These reasons naturally significantly limit the viability of securitization as a means for raising capital by corporations and individuals, mainly small companies and individual creators or inventors. In general, attempts to deal with this issue manifest in two ways: first, intellectual property rights are securitized at an advanced stage in which future royalty streams are more easily foreseeable and when the validity of the rights is unquestionable. Second, the securities that are issued in the securitization transaction are backed by a large collection of assets in a way that reduces the dependence on the performance of one particular asset. While it is easier to challenge one patent or trademark, challenging a hundred-patent portfolio is harder. Indeed, in part III of this Article, we stressed that copyrights in films are not securitized before the film's production process is completed and sometimes only after the film has been released and is at a stage where the economic success of the film has already been established. Similarly, film studios securitize entire catalogs of their films and thus diversify risk. Likewise, securing financing using patents usually requires a portfolio of patents. Therefore, it follows that securitization of patents will also require a portfolio of patents. Lastly, trademarks can also be securitized at the phase where their economic value is known and stable.

As the discussion above illustrated, securitization has proven important in the innovation process and has the potential to be a very important tool for raising capital for research and development. Patents are attractive to investors under certain conditions and they can be securitized in order to secure financing. In the following paragraphs we illustrate the aforementioned methods of coping with and minimizing risks through securitization of patents. Assessing the economic value of patent rights to be securitized is a complex and complicated field.²⁰² The

²⁰¹ Eisbruck, *supra* note 31, at 443.

²⁰² Glasner, *supra* note 116, at 61-63; Nikolic, *supra* note 166, at 413-419 (discussing different valuations methods for patents).

newer the patent is, the harder it is to assess the exact extent it will penetrate the market and foresee the future revenues it will generate, especially when dealing with patents over inventions that are simply improvements rather than breakthrough pioneering inventions.²⁰³ It is also important to note that the commercialization potential of an invention, even very important ones, is not always clear upfront, as the data discussed above showed. Unlike an older patent that has historical data that can provide information regarding its performance and revenues, when a new patent is penetrating the market, there is significant uncertainty regarding its commercial and economic prospects and it is difficult to foresee whether it will succeed or fail. Therefore, securitization of a future cash flow deriving from a new patent requires the use of external credit enhancements, in which an entity with a high credit rating provides guarantees for the transaction.²⁰⁴

Even older patents are not immune to the risk that revenues will change over time. Protecting technological innovation, patents are always exposed to new, advanced technological developments that can potentially make the patented invention obsolete and useless, especially those inventions with very short shelf life such as computer software and other rapidly changing innovations.²⁰⁵ Indeed, this risk is especially prevalent in the high tech industry where the pace of innovation is fast and new technologies and products are constantly replacing the old. Therefore, even if historical data exists as to the cash flow that the patent has yielded in past years, there is no guarantee that new products or advanced technological processes will not obviate the need for the patent and eliminate the future income it can yield. However, the shorter the life of the security backed by the cash flow from the patent rights is, the smaller the risk will be. Similarly, the following factors reduce the risk of obsolescence of the patent due to advanced technological development: in many instances such issued obsolete patents can actually block other companies from using innovative newer technologies, even patented ones, and require licenses in order to practice the newer patented invention; the time it takes for new technology to penetrate the field and compete with the patent; the high cost involved with a new technology penetrating the field and additional

²⁰³ Jacobs, *supra* note 200, at 458-459.

²⁰⁴ Eisbruck, *supra* note 31, at 445.

²⁰⁵ Jacobs, *supra* note 200, at 459.

barriers to entry; the strength of the brand name associated with the patent; and the presence of diverse applications and uses for the patent.²⁰⁶

An additional way to lower the risk involved in the transaction is to securitize a patent portfolio rather than just a lone patent.²⁰⁷ Parchomovsky and Wagner prove that a portfolio as a whole is worth more than the individual patents of which it is comprised, that is, the whole is greater than the sum of its parts.²⁰⁸ Patent portfolios simultaneously increase both the scale and the diversity of available marketplace protections for innovations. First, by combining the “right to exclude” of many closely related patents, a patent portfolio greatly increases the effective scale—the total scope of protection in the marketplace—beyond that of a collection of differentiated patents. Second, patent portfolios offer the well-known benefits of asset diversification, including effectively addressing future uncertainties related to technological development, market conditions, and competitor moves by offering a much broader array of protected subject matter. Therefore, securitization of patent portfolios eases the complete dependency on the performance of one particular invention and therefore reduces the impact of the risk factors and uncertainty inherent in the patent field. Even small companies that do not possess a large patent portfolio can arguably securitize the income streams from licensing their patents by employing a multi-seller securitization scheme where a few technologically-related companies can create a patent pool of their inventions and securitize them.

An additional difficulty that characterizes securitization in the intellectual property field stems from the fact that the rights granted to the intellectual property right holders are limited in time. Unlike ownership of tangible possessions, which always exist, can be transferred to others, and can be inherited, the term of intellectual property ownership is limited in time. For example, a copyright is generally valid until 70 years after the death of the author of the work.²⁰⁹ Patents are even more limited – 20 years from the date that the application for the patent was filed.²¹⁰ When the period of protection is up the rights expire, the work of authorship or invention enters the

²⁰⁶ Eisbruck, *supra* note 31, at 446.

²⁰⁷ Nikolic, *supra* note 166, at 411-12.

²⁰⁸ Parchomovsky & Wagner, *supra* note 140.

²⁰⁹ 17 U.S.C. § 302.

²¹⁰ *Id.* § 154(a)(2).

public domain, and all are free to use it. Therefore, securitization of future royalty streams deriving from intellectual property inventions or works of authorship must take into account the impact of the expiration of various rights throughout the life of the asset-backed bonds. The expiration of intellectual property rights adds an element of uncertainty to the securitization transaction and increases the level of risk involved in the transaction. However, these risks can be mitigated by ensuring that the bonds issued in securitization transaction are backed by cash flow deriving from inventions or works of authorship whose term of rights is longer than or at least equal to the term of the bonds.²¹¹

Another hurdle facing the development of the intellectual property securitization market is that some intellectual property rights, such as copyrights and patents, can be licensed to many entities because they provide their holders with a set of exclusive rights that can be licensed to many entities. For example, copyrights are actually a bundle of legal rights that give the author exclusivity of use in various ways: the right to reproduce the work; the right to publish an unpublished work; the right to rent out cinematographic work, recordings, and computer software; the right to adapt the work and create derivative works, public performance rights, broadcast rights; and the right to make the work available for public use.²¹² Each of these legal rights separately allows for the generation of profits from the work. Most of the time all the rights are licensed to one entity. However, a difficulty arises in some cases when these rights are not held by one party but are, instead, divided among a number of parties to whom the author has assigned specific separate rights over the duration of her career. For example, royalty streams deriving from different copyrights on a musical composition are generally divided between the artist, the recording company, and the distributor.²¹³ The limited bargaining power of most artists, especially in the early stages of a musical career, does not allow artists to retain ownership over all of the rights to their musical works. The division of rights between different parties makes it difficult for securitization transactions to take place in the area of copyrights. Since the securitization transaction is based on the assignment of rights that are

²¹¹ Eisbruck, *supra* note 31, at 448.

²¹² See *supra* notes 66-73 and accompanying text.

²¹³ Lital Helman, *When Your Recording Agency Turns into an Agency Problem: The True Nature of the Peer-to-Peer Debate*, 50 IDEA 49 (2009).

owned by the originator to an SPV, the rights must all be concentrated in the hands of the originator before the transaction can take place.

Securitization of intellectual property is challenging for additional reasons. There exist many challenges regarding valuation of intellectual property, which are naturally related to the problems mentioned above regarding the high volatility of the rights. Patents are essentially a tool meant for the defense of an innovation from use by others rather than a tool designed for commercial use.²¹⁴ Despite the growing field of monetization of patents in the form of licensing, litigation, sale, and other methods, there is no agreed-upon method for valuation of patents.²¹⁵ In contrast to tangible assets, valuation of intellectual property assets proves much more difficult for a number of reasons. First, without established markets, it is difficult to ascertain the value of goods. Furthermore, the nature of different assets varies widely and the associated transactions are similarly wide-ranging.²¹⁶ In fact, by definition, patents must be novel and unique.²¹⁷ Finally, there are many external factors that can influence the value of such intangible assets.²¹⁸ Despite these difficulties, a number of methods of patent valuation have developed.

The three basic approaches to patent valuation are the cost approach, the market-value approach and the income approach.²¹⁹ The cost approach is based on the expenditures involved in the development of the patent. This approach has limited use in decisions involving transactions with the patents as it does not take into account realistic

²¹⁴ Malcolm T. "Ty" Meeks & Charles A. Eldering, *Patent Valuation: Aren't We Forgetting Something? Making the Case for Claims Analysis in Patent Valuation by Proposing a Patent Valuation Method and a Patent-Specific Discount Rate Using the CAPM*, 9 NW. J. TECH. & INTELL. PROP. 194, 196 (2010).

²¹⁵ *Id.*

²¹⁶ Maayan Perel, *An Ex-Ante Method of Patent Valuation: Transforming Patent Quality Into Patent Value*, 12 (Draft) (on file with the author).

²¹⁷ Michael S. Kramer, *Valuation and Assessment of Patents and Patent Portfolios Through Analytical Techniques*, 6 J. MARSHALL REV. INTELL. PROP. L. 463, 465 (2007).

²¹⁸ *Id.* at 466.

²¹⁹ Robert Pitkethly, *The Valuation of Patents: A Review of Patent Valuation Methods with Consideration of Option Based Methods and the Potential for Further Research*, Judge Institute Working Paper WP 21/97, The Judge Institute of Management Studies Trumpington Street, Cambridge CB2 1AG, 12 (1997).

future benefits deriving from the patent.²²⁰ Market methods value patents by looking to prices of similar patent transactions for comparison. The biggest difficulty involved in this method is finding comparable patent transactions. As noted above, patents are definitionally unique and hence the transactions pertaining to them are dissimilar as well.²²¹ Additionally, specific details pertaining to transactions are difficult to obtain because of the secretive nature of many patent transactions.²²² Intellectual property exchanges may be a helpful tool for market-based valuations. By increasing transparency and making market prices available, valuing patents becomes much less difficult.²²³ The income approach attempts to predict future cash-flow deriving from the patent over the course of the patent's life. Like the market-based approach, it uses data from the market but attempts to project future incomes from it.²²⁴

Aside from these three basic valuation techniques, there are a number of other techniques. Options pricing theories use tools from the financial options market and apply them to intellectual property valuation. One example is the adaptation of the Black and Scholes equation by Denton and Heald for patent pricing.²²⁵ The benefit of these methods is that they take into account possible future risks and are flexible enough to be adapted for different possibilities.²²⁶ One problem involved in using financial models is the difficulty in finding the requisite data for use as inputs, especially data relating to the volatility

²²⁰ Meeks & Eldering, *supra* note 214, at 202.

²²¹ Josh Lerner & Anne Layne-Farrar, *Valuing Patents for Licensing: A Practical Survey of the Literature*, 8 (March 3, 2006), available at SSRN: <http://ssrn.com/abstract=1440292>.

²²² Meeks & Eldering, *supra* note 214.

²²³ Ian David McClure, *Commoditizing Intellectual Property Rights: The Practicability of a Commercialized and Transparent International IPR Market and the Need for International Standards*, 6 *BUFF. INTELL. PROP. L. J.* 13, 28 (2008).

²²⁴ Pitkethly, *supra* note 219, at 8.

²²⁵ F. Russell Denton & Paul J. Heald, *Random Walks, Non-Cooperative Games, and the Complex Mathematics of Patent Pricing*, 55 *RUTGERS L. REV.* 1175 (2003). See also Dorit Samuel, *Intellectual Property Valuation: A Finance Perspective*, 70 *ALB. L. REV.* 1207 (2006-2007).

²²⁶ Pitkethly, *supra* note 219, at 10.

of the underlying assets.²²⁷ Once again, this may be an instance where patent exchanges can be instrumental in providing data.²²⁸ An alternate approach is to look at external data correlated with patent value rather than at the patent itself. For example, the number of patents owned by a particular firm, the number of patent citations (both forward citations and backward citations), and how much is spent on legal protection of the patent or on maintenance fee renewals have been found to be good indicators of the value and future success of patent portfolios.²²⁹ This method of data analysis is also limited by the availability of data as well as by the fact that these data are merely indicators of patent value but not necessarily reflections of it.²³⁰

Trademarks valuation is also a challenging task. Despite evidence attributing the market value of most companies in the S&P 500 index to intangible assets, Generally Accepted Accounting Principles do not allow for intangibles to be reported on balance sheets. Instead, all intangible assets are lumped together in general category of “goodwill”.²³¹ This measure of the total value of intangible assets is found by subtracting a company’s total hard assets from the total market value of a company, leaving just the intangible assets.²³² As in patents, cost method for trademark valuation looks at the expenditure involved in obtaining and protecting a particular trademark including legal fees, maintenance fees, and development and promotion costs. In most cases, the actual value of the trademark is greater than the cost to obtain it²³³ though recognition and the associated trademark value is often related to promotion costs.²³⁴ The income method uses the projected annual profit from the brand and works backward to figure out what percentage of that is attributable to the trademark.²³⁵ One method of figuring out the

²²⁷ Lerner & Layne-Farrar, *supra* note 221, at 12.

²²⁸ Meeks & Eldering, *supra* note 214.

²²⁹ *Id.*

²³⁰ Kramer, *supra* note 217, at 467.

²³¹ Fernando Torres, *Trademark Values in Corporate Restructuring*, 3-4(July 1, 2007), available at: <http://ssrn.com/abstract=1014741>.

²³² Michael J. Freno, *Trademark Valuation: Preserving Brand Equity*, 97 TRADEMARK REP. 1055, 1057 (2007).

²³³ *Id.* at 1058.

²³⁴ *Id.* at 1059.

²³⁵ *Id.* at 1060.

percentage attributable to the trademark is by looking at royalty rates charged for use of the trademark.²³⁶ As in patent valuation, market-value approaches assign value by seeing how much others would be willing to pay for purchase. And, as in patents, data for this type of valuation is difficult to obtain.²³⁷ Copyright valuation also poses similar difficulties to those raised by patent and trademarks valuation. Copyrights are evaluated using a variety of methodologies: cost, income, or market approach. Any attempt to open the securitization market to intellectual property requires addressing these challenges.

Asides from these valuation challenges, it is important to note that securitization introduces significant transactions costs compared with other tools of financing such as bank lending or venture capital financing. Securitization requires the expenditure of costs that are not negligible, including IP valuations costs, companies' formation costs, issuance costs and more. These costs, however, are usually internalized into the costs of securitization in a way that does not introduce additional independent costs into the process.

Securitization can also be challenging in the field of intellectual property where it is done nationally and globally. The US has regulated the field of intellectual property through federal and state law. While patents and copyrights are regulated exclusively through federal law trademarks are also regulated through state law. As a result there might be multiple rules regarding each subject matter, including the scope of the rights granted. Similarly, there is a great variety of intellectual property legal systems around the world that differ greatly. While the TRIPS agreement attempted to bring about the adoption of minimal standards, in practice there exist many differences between legal systems, some of which significantly affect the nature and scope of intellectual property rights. For example, there exist major differences regarding the scope of subject matter eligibility in patent law (such as in the area of software patents, pharmaceuticals and more), databases protection under copyright law, and many more. There also exist differences regarding recording ownership rights in intellectual property which can also affect securitization. While most countries provide for a system for recording patents and trademarks, no mandatory system for recording rights exist in relation to copyrights in most legal systems.

²³⁶ *Id.* at 1061. See also Michael A. Einhorn, *Trademark Valuation and Market Analysis* (February 5, 2014). Available at SSRN: <http://ssrn.com/abstract=2391470>.

²³⁷ Freno, *supra* note 232, at 1062.

These institutional and regulatory differences, in turn, can introduce additional uncertainty regarding the ability to securitize different intellectual property rights nationally and globally.

Intellectual property detection and enforcement are also challenging to securitization. Copyright and trademark infringement have become very widespread in recent years, especially in the internet environment. This significantly affects the value of intellectual property rights and the expected returns from securitizing such assets, especially musical and cinematographic works as well trademarked goods, which are all subject to file sharing and counterfeiting,.

There are also some major specific challenges to securitization of patents stemming generally from the quality of patents issued by the US Patent and Trademark Office that raise great concerns pertaining to the validity of issued patents. These quality concerns pertain to many flaws with the patent law system, the vagueness of patent law doctrines, and other factors which result in many issued vague patents whose scope cannot necessarily be determined in advance, thus affecting the feasibility of their securitization. While the US patent system has recently gone through major patent reforms in the America Invents Act, major problems still challenge the quality of prosecution and enforcement of patent rights.

Furthermore, securitization can also introduce transactions costs. Employing securitization in the scheme introduced above might introduce additional costs and further fragmentation of rights in a way that can be costly for future innovation. Securitization can result in many people holding secured assets, at times of split copyright or patent rights, potentially introducing anti-commons challenges. This risk can be mitigated by providing the company with the ability to buy back its bonds. However, it is unlikely a company will manage to successfully buy back its bonds.

Last, intellectual property assets are subject to greater risks in bankruptcy, which can also affect the assets' securitization. Filing for bankruptcy can result in liquidation of assets under Chapter 7²³⁸ or reorganization under Chapter 11.²³⁹ In either situation, the assets of the debtor are assembled into a bankruptcy estate and entrusted to a trustee. In assembling the bankruptcy estate, the trustee is given the option of assuming, assigning or rejecting executory contracts.²⁴⁰ The term

²³⁸ 11 USC §701-784.

²³⁹ 11 USC §1101-1174.

²⁴⁰ 11 U.S.C. § 365(a) (“...the trustee, subject to the court’s approval, may assume or reject any executory contract or unexpired lease of the debtor.”).

"executory contract" is not defined by the law but the most commonly accepted definition is the Countryman Material Breach definition which provides that it is a "contract under which obligation of bankrupt and other party to contract are so far unperformed that failure of either to complete performance would constitute a material breach excusing performance of the other."²⁴¹ Most intellectual property licenses do fall under the Countryman definition as unperformed contracts, but not all do.²⁴²

11 U.S.C. § 365(a) gives the trustee of a licensor in bankruptcy the option of rejecting the licensing contract. The possibility that the contract will be rejected in the case of the bankruptcy of the licensor would be harmful to future possibilities of IP licensing. In response to *Lubrizol v. Richmond Metal Finishers*²⁴³ Congress enacted § 365(n). Under § 365(n), licensees are given the option of retaining their use of the IP rights for the duration of the agreement, as long as they continue to pay royalties. They can also agree to the rejection and sue for breach of contract under 365(g). If the licensee chooses to retain the rights granted by the license, the trustee's rejection serves to exempt the debtor from performing affirmative duties.

Although subsection 365(n) does offer some essential protections for IP licensees, there still exist a number of challenges regarding IP licensees. *First*, the protections found in § 365(n) apply to IP rights as defined in the Bankruptcy Code.²⁴⁴ Patents, copyrights, and trade secrets are all included but trademarks are not. Therefore, trademark licenses are left with no protection. Although Congress intended to revisit the issue of trademarks, it never did. At the same time, Congress charged bankruptcy courts with "development of equitable treatment of this situation."²⁴⁵ Bankruptcy courts were caught

²⁴¹ Countryman, *Executory Contracts in Bankruptcy, Part I*, 57 MINN. L. REV. 439, 460 (1973).

²⁴² Sometimes the court adopts a functional test based on the impact declaring it executory would have in the particular case. For full discussion of different types of IP as executory contracts see Peter S. Menell, *Bankruptcy Treatment of Intellectual Assets*, 22 BERKELEY TECH. L. J. 733, 755-66 (2007).

²⁴³ *Lubrizol v. Richmond Metal Finishers*, 756 F.2d 1043 (4th Cir. 1985), cert. denied 475 U.S. 1057 (1986).

²⁴⁴ 11 U.S.C 35A

between the letter of the law in § 365(n) and the desire to protect trademark licensees. Thus, uncertainty in the law and in the possible interpretations by the court undercut security in trademark licensing.²⁴⁶ For many years courts simply followed subsection 365(n) and left out trademarks.²⁴⁷ In the July 2012 case, *Sunbeam Products Inc. v. Chicago American Manufacturing*, the court attempted to harmonize the law and Congress's intent to include trademarks.²⁴⁸ The court circumvented § 365(n) and provided protection to trademark licensees through § 365(g). The court held that rejection of executory contracts can be considered a breach of contract and under § 365(g) the rights of licensees to use the trademark would not be terminated.²⁴⁹ *Second*, § 365(n) only applies to IP rights as defined by the bankruptcy code (11 U.S.C 35A). It includes "works of authorship protected under title 17" of the USC. Title 17 protects foreign works when the US and other countries have a treaty. It is not clear, however, how the statute would be interpreted in all cases of foreign copyrights.²⁵⁰ *Third*, the rejection of the contract exempts the debtor from any affirmative obligations, including any obligation to provide the licensee with future improvements or developments (e.g. software updates) of the product or to invest any further in R&D.²⁵¹ Menell argues that amending 365(n) to include future improvements would be very beneficial and at a minimal costs to bankrupt licensors.²⁵²

A few scholars offered a number of potential ways to protect licensees above and beyond 365(n) (or in the case of trademarks- to

²⁴⁵ S. Rep. No. 100-505, at 5 (1988) ("[T]o postpone congressional action in this area and to allow the development of equitable treatment of [trademark licenses] by bankruptcy courts").

²⁴⁶ Xuan-Thao N. Nguyen, *Bankrupting Trademarks*, 37 U.C. DAVIS. L. REV. 1267, 1293 (2004).

²⁴⁷ Zachary S. McKay, *A Dramatic Misconception: Why the Trademark Licensee Must Be Granted the Power to Overcome the Trustee in Bankruptcy's 11 U.S.C. Rejection*, 54 S. TEX. L. REV. 747, 766 (2013).

²⁴⁸ *Sunbeam Products Inc. v. Chicago American Manufacturing*, 686 F.3d 372 (7th Cir. 2012)

²⁴⁹ *Id.*

²⁵⁰ Peter S. Menell, *Bankruptcy Treatment of Intellectual Assets*, 22 BERKELEY TECH. L. J. 733, 778 (2007).

²⁵¹ *Id.* 780-3.

²⁵² *Id.* 784.

protect them in the first place). For example, Cieri and Morgan²⁵³ offered some drafting tactics such as including right to improvements, reduced royalty payments, liquidated damages clause, and other provisions.²⁵⁴ Others suggested that a licensee could protect herself against rejection by obtaining and perfecting a security interest in the IP. It would not mean that the contract would necessarily be enforced but it would disincentivize the debtor and the trustee from choosing to reject the contract. The licensee would be first in line in with a secured claim for rejection damages. Any profit the licensor gets by rejecting the contract would immediately go to the licensee.²⁵⁵

These challenges involved in IP licenses in bankruptcy are also raised regarding IP securitization transactions. The commonly held view is that a securitization transaction is an executory contract under Section 365 of the Bankruptcy Code because both the seller and the purchaser have continuing duties to perform such as payment of royalties by the purchaser and continued access to and use of the intellectual property of the seller.²⁵⁶ The same analysis and solutions provided above regarding IP licenses in bankruptcy are, however, applicable and can assist in overcoming the challenges pertaining to the securitization transaction. There are a number of additional difficulties that Section 365(n) does not address.²⁵⁷ Section 365(n) only protects the licensee's rights in the copyright or the patent or the trade secret. It does not protect additional contractual obligations that were undertaken by the licensor such as an obligation of the licensor to perform different support functions of the

²⁵³ Richard M. Cieri & Michelle M. Morgan, *Licensing Intellectual Property and Technology from the Financially-Troubled or Startup Company: Prebankruptcy Strategies to Minimize the Risk in a Licensee's Intellectual Property and Technology Investment*, 55 BUSS. L. 1649 (2000).

²⁵⁴ *Id.* at 1681-4.

²⁵⁵ *Id.* at 1691; Peter M. Gilhuly et al., *Intellectually Bankrupt?: The Comprehensive Guide to Navigating IP Issues in Chapter 11*, 21 AM. BANKR. INST. L. REV. 1, 49 (2013).

²⁵⁶ JASON H.P. KRAVITT, *SECURITIZATION OF FINANCIAL ASSETS* 213-217 (3rd ed. 2013).

²⁵⁷ Ronald S Borod & Thomas J Cassidy, *Clearing the Hurdles for IP Securitization in the US*, INTELL. ASSET MANAGEMENT 57-58 (2005) (discussing IP securitization transactions in bankruptcy).

licensed intellectual property. In bankruptcy a bankrupt licensor could reject provisions in the IP license contract that require the licensor to perform such support functions. Likewise, the bankruptcy of a licensee can also lead to similar results and permit the bankrupt licensee to reject or assume the license contract. These and other challenges can affect the successful securitization of IP assets.

In summary, securitization of intellectual property raises many challenges that cannot always be overcome.

VI. CONCLUSIONS

The singer David Bowie is considered a groundbreaking artist who, time after time, reinvented his musical style throughout a long and brilliant career. In 1997, he proved his originality in the financial field as well when he became the first artist to securitize the future royalty stream of the intellectual property rights to his music. He thus paved the way for other artists in the music industry, who have begun to follow his footsteps and recognized the hidden potential in copyright securitization as a progressive and innovative financing tool. The great interest that Bowie's securitization transaction aroused accelerated the development of the securitization market of intellectual property rights, including the securitization of trademarks and patents.

In the information age, intellectual property rights are a significant component of the GDP of developed countries. The centrality of intellectual property rights in the modern economy is expressed, *inter alia*, by their growing use as a means of financing. Securitization allows for the capitalization of intellectual property rights that yield a foreseeable royalty stream in order to raise interim funds for business activities. The securitization of intellectual property rights has many benefits, from the perspectives of the holders of those rights who would like to raise credit, the perspective of the investors in the capital market, as well as the perspective of the general public. Indeed, the worldwide securitization market for intellectual property rights has grown steadily but has not yet realized its full potential. The discussion in this Article sheds light on the hidden potential inherent in securitization of intellectual property rights and analyzes future challenges for the intellectual property market. In future work we will plan to address the specific challenges raised by each field of intellectual property and offer some workable frameworks for addressing them.