INTELLECTUAL PROPERTY SECURITIZATION♦

DOV SOLOMON & MIRIAM BITTON*

Abstract

This Article aims to explore the securitization of intellectual property [hereinafter "IP"], introducing the promise of said financing method in the growing field of IP. In recent years, IP has become a major component of developed economics. 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 IP 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 IP assets such as trademarks, copyrights, and patents. The Article also considers the benefits and challenges of securitizing IP and suggests preliminary solutions to these challenges.

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* Dov Solomon, Assistant Professor of Law, College of Law and Business, Ramat Gan Law School; Miriam Bitton, Associate Professor of Law, Bar-Ilan University, Faculty of Law. We are grateful to Adi Ayal, Robert G. Bone, Josef Montag, Emily M. Morris, Jacob Nussim, Gideon Parchomovsky, Hans-Bernd Schafer, Ted M. Sichelman, and the participants in the European Association of Law And Economics 31st Annual Conferrence, the Second Private Law Consortium Workshop at the University of Pennsylvania Law School, Munich Conference on Innovation and Competition, Lecture Series at the Hong Kong University Law Faculty, Bar-Ilan University Faculty of Law Seminar, the Commercial Law Workshop at the College of Law and Business Ramat Gan Law School, and Bar-Ilan Intellectual Property Law Workshop for their helpful comments and discussions. We are also grateful to Derora Tropp and Shlomi Ardan for excellent research assistance.

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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. Nowadays, information products—such as pharmaceuticals, computer software, databases, films, musical works, broadcasts of sporting events, and brand names—have become major

assets in modern economies' wealth. High tech industries, which are based on IP rights, are now a driving force for economic growth and constitute a significant component in the gross domestic product [hereinafter GDP] of developed countries. According to recently released data, industries based in IP 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 IP 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—securitization of IP rights. Securitization is a major financing tool in the modern economy.[2] Securitization of assets backed by future income streams continues to grow as a 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 IP field.[3] Among the famous securitization transactions in the field of IP 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 IP rights that generate predictable streams of royalties in order to obtain interim financing for business operations.[4] 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, removes barriers to entry in investment in the IP field, and expands and diversifies 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 IP rights is continuing to grow steadily.

Consideration of the securitization of IP is therefore critical in light

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

2 Edward M. Iacobucci & Ralph A. Winter, *Asset Securitization and Asymmetric Information*, 34 J. LEGAL STUD. 161, 162 (2005); 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).

3 Lopucki, *supra* note 2.

4 *See* Comm. on Bankr. & Corporate Reorganization of the Ass'n of the Bar of the City of N.Y., *Structured Financing Techniques*, 50 BUS. LAW. 527, 529-30 (1995) [hereinafter *Structured Financing Techniques*]; Steven L. Schwarcz, *The Alchemy of Asset Securitization*, 1 STAN. J.L. BUS. & FIN. 133, 135–36 (1994); Robert Stark, *Viewing the LTV Steel ABS Opinion in its Proper Context*, 27 J. CORP. L. 211, 213 (2002).

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 greatest in the field of technological development and patenting where small businesses, which are generally considered more innovative than large businesses,[5] face significant challenges in raising capital.[6] On average only 10% 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 IP is in line with the theoretical foundations of an incentive and recoupment-based IP 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 general theoretical foundations in the field of financing and specific theoretical foundations of securitization. Further, Part II presents the structure of a securitization transaction and depicts the securitization market for IP, including the different players and tools and their roles in the securitization process. Part III offers an overview of the theoretical foundations of IP and describes the development of the securitization markets for copyrights, trademarks, and patents. Part IV analyzes the benefits of the securitization of IP rights, not only from the perspective of the right-holders who wish to get credit, but also from the perspective of the investors in the capital markets and from the general public. Part V examines the obstacles standing in the way of further growth of the securitization market for IP and suggests methods for overcoming them. Moreover, it suggests future questions to be explored regarding the securitization of IP. Finally, Part VI briefly summarizes the discussion.

I. THEORETICAL FOUNDATIONS OF SECURITIZATION

A. *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

5 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* R&D, PATENTS AND PRODUCTIVITY 21, 38–39, 51–52 (Zvi Griliches ed.,1984), *available at* http://www.nber.org/chapters/c10043; Samuel Kortum & Josh Lerner, *Assessing the Contribution of Venture Capital to Innovation*, 31 RAND J. ECON. 674, 682 (2000); Ted Sichelman & Stuart J.H. Graham, *Patenting by Entrepreneurs: An Empirical Study*, 17 MICH. TELCOMM. & TECH. L. REV. 111, 114 (2010).

6 *See* Sichelman, & Graham, *supra* note 5, at 166–67.

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. In the modern world, it seems that the majority of wealth is found in bank accounts—such as checking accounts and savings plans, and in 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.[7] Like 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.[8]

This treatment of contractual rights as transferrable property is essential for economic development in general and for the advancement of the credit market in particular.[9] The notion of an assignment of rights for the purpose of raising funds is extremely prevalent and significant in the modern economy.[10] 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 receivables[11] or use

7 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." RESTATEMENT (SECOND) OF CONTRACTS § 317(2) (1981).

8 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).

9 *See* E. ALLAN FARNSWORTH, CONTRACTS § 11.2 n.1 (4th ed., 2004) ("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.") (citing 1 H. MACLEOD, PRINCIPLES OF ECONOMICAL PHILOSOPHY 481 (2d ed., 1872)).

10 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* U.N. CONVENTION ON THE ASSIGNMENT OF RECEIVABLES IN INT'L TRADE, U.N. Sales No. E.04.V.14 (2004).

11 "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, e.g.*, FIDELIS ODITAH, LEGAL ASPECTS OF RECEIVABLES

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 secure the repayment of loans by assets would be restricted to their limited 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.

The discussion in this Article is focused on the utilization of royalty streams deriving from IP as means for raising funds. IP 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 IP 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, thereby granting others full ownership (an assignment) of her IP 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 IP right at issue. The existence of such future cash flow allows for the securitization of the contractual rights of the licensor to receive royalties from the licensees and enables the IP right owner to raise funds.

B. *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 company[12]—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

FINANCING 19–23 (1991).

12 These assets usually originate in loans or property or services supplied to the originator's customers. *See* Kenneth C. Kettering, *Securitization and Its Discontents: The Dynamics of Financial Product Development*, 29 CARDOZO L. REV. 1553, 1564 (2008); Schwarcz, *supra* note 4, at 135 n.7.

originator's other assets and selling them to a separate legal entity. The latter is commonly referred to as a special purpose vehicle [hereinafter 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 [hereinafter ABS].[13] 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 financing methods. To that end, in the following 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.

However, bank lending, even when it is secured, 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,[14] 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.[15]

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

14 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)–(c) (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.").

15 *See id.* § 506(a)(1). 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

Second, regardless of whether the bank's interest is fully 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'[16] right to realize the collateral.[17] When a secured creditor's interest is adequately protected, the Bankruptcy Code allows the debtor in possession to make use of the collateral in an effort to rehabilitate the company.[18] 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 its risk of insolvency.[19]

By 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.[20] By isolating specified assets and securitizing them, the originator is able, in most cases, to fund operations at an effective interest rate lower

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 Mortgage Meltdown: Lessons from Undercapitalization*, 16 FORDHAM J. CORP. & FIN. L. 529, 538–40 (2011).

16 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)(F) (1999).

17 11 U.S.C. § 362(a)(2) (2010). 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).

18 *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.

19 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 4, at 150.

20 *See*, Hugh Beale et al., The Law of Personal Property Security 242 (2007); 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 4, at 529–31; Gregory R. Salathe, Note, *Reducing Health Care Costs Through Hospital Accounts Receivable Securitization*, 80 VA. L. REV. 549, 554–55 (1994).

than that of traditional financing methods.[21] 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.[22] 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, banks must hold minimum capital as a percentage of risk-weighted assets (loans and investments).[23] 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.[24] One 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. Another purpose is to promote diversification of loans and equitable access to banking services. As a result of these regulatory limitations, bank credit is sometimes not available for a company. 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 CAR or 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

21 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*, 1 J. APPLIED CORP. FIN. 32, (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* A PRIMER ON SECURITIZATION 171, 174 (Leon T. Kendall & Michael J. Fishman eds., 1996).

22 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).

23 *See* BASLE COMMITTEE ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS (1988), http://www.bis.org/publ/bcbs04a.pdf.

24 *See, e.g.*, 12 C.F.R. § 32.3.

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, which in turn allows investors to require lower interest rates. Compared to the issuance of corporate bonds, asset securitization significantly reduces the cost of funds.

The venture capital industry is another popular method of raising funds.[25] 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. Funding through venture capital is very common in high technology industries, such as biotechnology, software, and information technology.

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.[26] The typical contractual arrangements between a company and a venture capital fund give the latter control power.[27] 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 fund 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

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

26 *See* Paul A. Gompers, *Optimal Investment, Monitoring, and the Staging of Venture Capital*, 50 J. FIN. 1461 (1995) (explaining 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).

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

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.[28] 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 twenty year maturities are not atypical for asset-backed securities. The possibility of obtaining long-term prospects of investors in asset-backed securities contrasts sharply with the considerably shorter prospects of venture capitalists.[29] Asset-backed securities can tailor investment prospects to suit the business programs of early-stage companies, enabling research to follow the most scientifically productive paths instead of being constrained by financially driven business deadlines enforced by the venture capital industry. [30]

C. *Players in the Securitization Market*

In order to raise interim funds for business activities, it is possible to utilize IP 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 IP rights are assigned to it. The SPV funds the purchase of the income streams by raising credit from investors in the

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

29 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 27.

30 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).

capital market through the issuance of asset-backed securities, that is, securities backed by securitized IP 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 IP, which is the subject of this Article.

1. 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 IP 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 IP 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 business activity. Therefore, the use of securitization as a financing tool generally allows IP owners to reduce the cost of raising credit, effectively improving their accessibility to funding sources.[31]

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,[32] in which a number of originators take part.[33] In this structure, different originators assign their IP 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, it lowers 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 IP 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.[34]

31 *See* the discussion *infra* Part III.

32 For a description of a multi-seller securitization conduit, *see* Schwarcz, *supra* note 4, at 140–41.

33 *See* Adam Grant, Note, *Ziggy Stardust Reborn: A Proposed Modification of the Bowie Bond*, 22 CARDOZO L. REV. 1291, 1307–1313 (2001) (a proposal to use multi-seller securitization conduit in the IP field).

34 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).

2. Special Purpose Vehicle (SPV)

A SPV[35] is established in order to acquire income streams (royalties) from IP 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 to establish is influenced by the desire to protect investors by distancing them from the risk of bankruptcy of the SPV. In many securitization transactions, the SPV is established as a company whose board of directors is comprised of individuals acting on behalf of the investors, thereby retaining veto power over the board's decision to open bankruptcy proceedings.[36]

The money that the SPV raises through issuing asset-backed securities is used as payment for the acquisition of the IP rights from the originator. After the asset-backed securities are issued, the SPV constitutes a "pipeline" delivering cash flow derived from the IP 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.[37] 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.[38]

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35 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), http://www.isda.org/speeches/pdf/SPV-Discussion-Piece-Final-Feb01.pdf (noting that the terms SPV and SPE can be used interchangeably).

36 The appointment of a director on behalf of the investors 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) ;A. Brent Truitt & Bennett J. Murphy, *Bankruptcy Issues in Securitizations*, in SECURITIZATIONS: LEGAL AND REGULATORY ISSUES 2-1, § 2.04 (Patrick D. Dolan & C. VanLeer Davis, III eds., 2012); 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 4-1, 4–21 (Marvin E. Jacob et al. eds., 1998, supp. 2003); Michael J. Cohn, *Asset Securitization: How Remote is Bankruptcy Remote*?, 26 HOFSTRA L. REV. 929 (1998); Ellis, *supra* note 20 (using a trust as an SPV in order to minimize the risk of bankruptcy); *see* Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L. J. 387, 421 (2000); John H. Langbein, *The Secret Life of the Trust: The Trust as an Instrument of Commerce*, 107 YALE L. J. 165, 172–73 (1997).

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

38 Fidelis Oditah, *Great Britain*, *in* ASSET-BACKED SECURITIZATION IN EUROPE 99, 102 (Theodor Baums & Eddy Wymeersch eds., 1996); Kenneth C. Kettering, *supra* note 12, at 1564–

Securitization is the sole purpose of the SPV. Since the SPV has no other assets except for the royalty streams deriving from the IP 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 securities therefore comes from the quality of the IP rights that secure it and not the actions of the SPV that issued it.[39]

3. Servicer

Since the SPV is not prepared to administer the collection of royalties deriving from the IP rights assigned to it, the SPV enters into an agreement with a servicer—generally the originator—for collection purposes.[40] In the complex structure of a multi-seller securitization conduit, in which different originators transfer their income stream (royalties) of IP rights to one SPV, it is common to select one originator as a master servicer of all of the securitized assets.[41] The agreement for collection services generally sets out the procedure for replacing the servicer should she become insolvent or otherwise have difficultly carrying out the job properly.[42]

The servicer transfers the continuous royalty streams deriving from the IP 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.[43]

65; Schwarcz, *supra* note 4, at 135–36; Stark, *supra* note 4, at 215–16; *Structured Financing Techniques*, *supra* note 4, at 554; Truitt & Murphy *supra* note 36 § 2.03.

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

40 *See Structured Financing Techniques*, *supra* note 4, at 548-49; Stark, *supra* note 4, at 214.

41 FRANKEL, *supra* note 20, at 76–77 (supp. 1999).

42 *See* Fed. Deposit Ins. Corp. 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* FRANKEL, *supra* note 20, at 94; Thomas E. Plank, *The True Sale of Loans and the Role of Recourse*, 14 GEO. MASON U. L. REV. 287, 295 (1991).

43 HUGH BEALE ET AL., *supra* note 20, at 244; FRANKEL, *supra* note 20, at 94–95; 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 (1993).

4. Investor

The securitization process constitutes a unique source of funds for payments to the investors in an asset-backed security—the royalty stream deriving from the IP rights that were securitized.[44] 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 originator[45] as well as from the broad diversification created by the size of the pool of assets backing the securities,[46] especially in the case of a multi-seller securitization conduit.

5. 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.[47] 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.

The rating reflects the agency's assessment of the likelihood that the cash flow deriving from the securitized IP rights will fully repay the principal and interest payments of the asset-backed security within the designated time.[48] The higher the credit rating of the asset-backed securities, the lower the interest rates on the investments.[49] The high ratings agencies generally give to asset-backed securities allow originators to reduce their financing costs by paying less in overall interest.

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

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

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

46 Ellis, *supra* note 20, at 301.

47 The leading international ratings companies are: Standard and Poor's (S&P), Moody's Investors Service, and Fitch Ratings.

48 Neil D. Baron, *The Role of Rating Agencies in The Securitization Process*, *in* A PRIMER ON SECURITIZATION 81, 81–82 (Leon T. Kendall & Michael J. Fishman eds., 1996).

49 Shenker & Colletta, *supra* note 44, at 1401.

securities, rating agencies may establish various restrictions regarding the structure of the securitization transaction. For example, rating agencies tend to require SPVs to incorporate for the sole purpose of the securitization in order to minimize the risks involved in their actions.[50]

6. 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 IP 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 IP rights. The distinction depends on whether the party carrying the risk is internal or external to the securitization transaction.[51] 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, which provide guarantees or insure the risk inherent in the securities issued in securitization transactions.[52] 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.[53] In this way, up until the determined level of coverage, all losses from the securitized IP 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

50 EILIS FERRAN, MORTGAGE SECURITIZATION – LEGAL ASPECTS 17 (1992); FRANKEL, *supra* note 20, at 394–95.

51 *Structured Financing Techniques*, *supra* note 4, at 549–50.

52 Schwarcz, *supra* note 4, at 139–40.

53 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.

to the element of risk involved in the IP rights.[54]

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. One method of internal credit enhancement is increasing the pool of assets backing the securities in a securitization transaction.[55] This basic mechanism for credit enhancement is designed to create "over-collateralization," such that the value of the IP rights backing the securities issued in the securitization transaction exceed what is required for repayment.[56] 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 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.[57]

Another common method of internal credit enhancement in the securitization market is the division of the asset-backed securities into tranches at different priority levels.[58] 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 IP assets backing the securities are first charged against them.[59] 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 IP 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

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

55 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).

56 Schwarcz, *supra* note 4, at 140–41.

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

58 Schwarcz, *supra* note 4, at 143–44.

59 Plank, *supra* note 42, at 305.

risk in the IP 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, which 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 IP rights backing the securities and is therefore best situated to estimate the value of the subordinated securities, which embody the risks present in the securitized assets. This information gap that exists between the originator and the potential buyers of subordinated securities results in greatly discounted offers from 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 purchase them directly.

7. Trustee

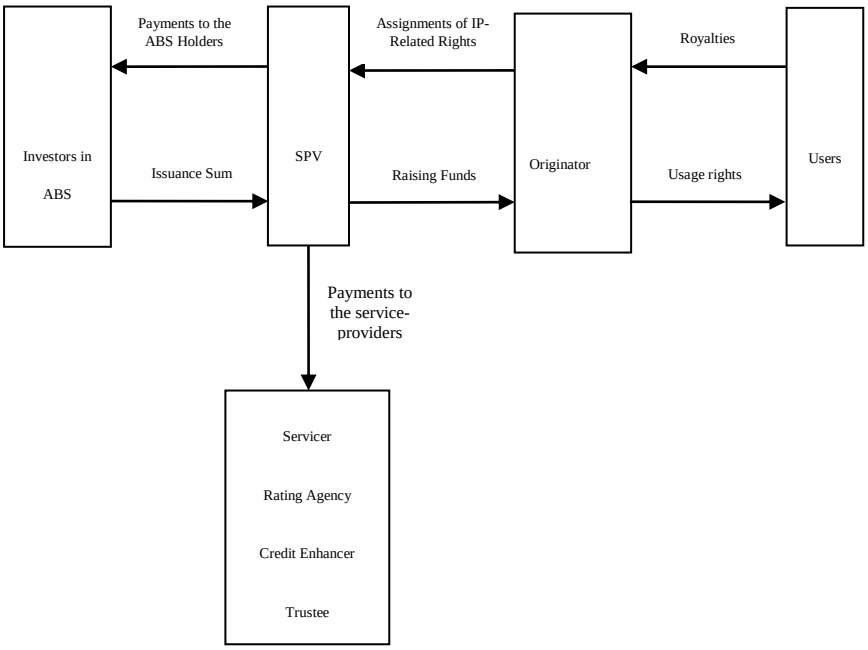
In the securitization process, a lien on the securitized assets is granted to the investors in asset-backed securities. The lien is registered in the name of a trustee in favor of the security holders, who works to protect the interests of the investors. The duties of the trustee in the securitization transaction are detailed in the deed of trust[60] and include, among others, monitoring the deposit of the royalty streams deriving from the IP rights 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 IP 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.

60 *See* Susan S. Steves Keiser, *The Role of the Trustee in Securitization Transactions*, in SECURITIZATION: ASSET-BACKED AND MORTGAGE-BACKED SECURITIES 8-1, 8-5 (Ronald S. Borod ed., 2004).

8. Underwriter

An underwriter or a consortium of underwriters is put in the charge of the relationship between the SPV and the capital market.[61] 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.

Diagram: Intellectual Property Securitization: Transaction Structure and Payment Streams



II. 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.[62] As the years passed, the use of securitization spread to a

61 *Structured Financing Techniques*, *supra* note 4, at 529.

62 Shenker & Colletta, *supra* note 44, 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

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.[63] There is essentially no limit to the variety of assets that can be securitized. It is possible to securitize any asset that yields a foreseeable future cash flow.[64]

IP securitization is thought to be one of the areas that have seen the most development in recent years.[65] Beginning in the mid-1990s, IP rights have constituted the basis for securitization transactions. In the following paragraphs, we briefly survey the underlying theories of IP rights with a detailed discussion of each field and the development of the securitization markets of copyrights, trademarks, and patents.

A. *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 authors in order to incentivize the creation of works of authorship.[66] 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. As a result, this undercutting would affect the author's ability to recoup her investment in creating the work in the first place.[67]

The U.S. Constitution explicitly grants Congress the power to create copyright law. Specifically, it provides that Congress has the power "[t]o 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."[68] U.S. copyright law is aimed at encouraging the creation of "original works of authorship," including literary, dramatic, musical, artistic, and certain other

A. Buser, *The Origins and Evolution of the Market for Mortgage-Backed Securities*, 3 ANN. REV. FIN. ECON. 173 (2011).

63 Yuliya A. Dvorak, *Transplanting Asset Securitization: Is the Grass Green Enough on the Other Side?*, 38 HOUS. L. REV. 541, 546–47 (2001); FRANKEL, *supra* note 20, at 8, 37–38; Iacobucci & Winter, *supra* note 2, at 161–62; Lupica, *supra* note 28, at 602–03; Shenker & Colletta, *supra* note 44, at 1380; *Structured Financing Techniques*, *supra* note 4, at 538–39.

64 LoPucki, *supra* note 2, at 25; Lupica, *supra* note 28, at 208; Shenker & Colletta, *supra* note 44, at 1397.

65 Eisbruck, *supra* note 34, at 444.

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

67 *Id.* at 40.

68 U.S. CONST. art. I, §8, cl. 8.

intellectual works by rewarding authors with a set of exclusive economic and moral rights.[69] It grants authors the exclusive right to reproduce the work in copies or phonorecords;[70] to prepare derivative works based upon the work;[71] to distribute copies or phonorecords of the work to the public by sale, rental, or other means;[72] to perform the work publicly;[73] to display the work publicly;[74] and to digitally transmit sound recordings.[75] 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.[76] This means that the 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 seventy years after the death of the author.[77] Copyrighted works can be transferred in different ways including by assignment and the grant of either exclusive or non-exclusive licenses.[78] 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, securitization is a common practice only in the film and music industries and has been employed mainly where works have been 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.[79] As a result of the securitization of IP rights, the film studios obtained benefits on numerous levels:

69 17 U.S.C. § 102 (2010).
70 *Id.* at § 106(1).
71 *Id.* at § 106(2).
72 *Id.* at § 106(3).
73 *Id.* at § 106(4).
74 *Id.* at § 106(5).
75 *Id.* at § 106(6).
76 *Id.* at § 106A.
77 *Id.* at § 302.
78 *Id.* at §§ 201–05.
79 Jay H. Eisbruck, *Blockbuster or Flop? The History and Evolution of Film Receivables Securitization, 1995-2005*, 11 J. STRUCTURED FIN. 11, 11–12 (2005).

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 financing for accounting purposes.[80]

In order to minimize the risk to investors, 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 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.[81]

For the most part, securitization is done on an entire catalog of films belonging to a particular studio and selective securitization (i.e., "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.[82] The all or nothing approach prevents 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.[83] 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.[84]

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 IP rights of musical works. In 1997, Bowie raised $55 million through the issuance of bonds backed by anticipated royalties from the sale of his first twenty five albums.[85] The chief architect of the deal was David Pullman, a financial and banking expert known for his creative securitization initiatives.[86]

One of the unique characteristics of David Bowie's successful

80 Eisbruck, *supra* note 34, at 452; HAROLD L. VOGEL, ENTERTAINMENT INDUSTRY ECONOMICS: A GUIDE FOR FINANCIAL ANALYSIS 121 (2011).
81 Eisbruck, *supra* note 34, at 452.
82 Lupica, *supra* note 28, at 236–37 (discussing selective securitization).
83 Lois R. Lupica, *Revised Article 9, Securitization Transactions and the Bankruptcy Dynamic*, 9 AM. BANKR. INST. L. REV. 287, 314–15 (2001) (discussing the risks to the stability of the originator who engages in selective securitization).
84 Eisbruck, *supra* note 34, at 455–56.
85 Grant, *supra* note 33, at 1291–92.
86 Aaron Elstein, *If It Moves, David Pullman Might Securitize It*, AM. BANKER, (Feb. 27, 1997).

music career—a characteristic that constituted a significant factor in him becoming the ideal originator in the IP securitization market–is the fact that most of the copyrights to his musical works were completely in his possession before the securitization transaction.[87] In contrast to Bowie, who is considered a superstar in the music 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.[88] The dispersal of copyrights among different parties throughout a music career is likely to leave those artists without significant assets to securitize and thus limits the feasibility of using securitization as a tool for financing.

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.[89] Therefore, the bonds backed by the flow of funds from his musical works received the high credit rating of Aaa by Moody's.[90] That said, in 2004, Moody's lowered the rating of the bonds following the lowering of the credit rating of the credit-enhancer of the deal and also due to a slowdown in the music industry.[91] However, by 2005, an impressive recovery was noted in sales, due to the development of online music purchasing services like Apple's iTunes Store.[92] The positive trend in the music industry evoked a renewed interest in issuing securities backed by rights to musical compositions.[93]

In the years following David Bowie's securitization transaction, additional artists, like the singer James Brown, the music production team Ashford and Simpson, and the band The Isley Brothers issued securities backed by royalty streams coming from their musical works.[94] Recently, it was publicized that the Society of European Stage Authors and Composers (SESAC) company, which holds the musical

87 Grant, *supra* note 85, at 1299–1300.

88 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, 200–01 (1999).

89 *Id.* at 204–05.

90 Eisbruck, *supra* note 34, at 449.

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

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

93 *Id.*

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

copyrights of Bob Dylan, Neil Diamond, and other artists, is planning to raise $300 million through the issuance of securities backed by royalties from songs penned by the artists.[95] However, as of this writing, it has been 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.[96]

In sum, it seems that securitization of copyrights is a useful way for raising capital. However, securitization is common mainly in the film 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). By using securitization, an author can maintain ownership rights and offer a temporary transfer of the income streams deriving from the IP in a way that corresponds with her needs. 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 and the value of whose works can be determined to guarantee returns on investment. Naturally, it seems that the prevalent examples are those of prominent musicians or movie studios whose works of authorship are very valuable. This financing scheme is less viable for new authors who have no established reputation. Only after those authors 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 securitization will be employed.

Additionally, to date, the existing examples of successful

95 Liz Moyer & Al Yoon, *The Bonds, They Are A-Changin'*, WALL ST. J. (Aug. 8, 2012), http://online.wsj.com/article/SB10000872396390444246904577575551487651814.html.

96 Tracy Alloway, *Goldman Rethinks Dylan Royalties Bond*, FIN. TIMES, (Aug. 30, 2012), 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), http://www.theguardian.com/business/2012/aug/31/bob-dylan-bond-goldman-sachs.

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 music and film works, consideration should be given to the expansion of securitization to other types of works. 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.

B. *Trademarks*

In recent years, trademarks have become increasingly valuable. As a result, trademark owners frequently protect their rights by enforcing them against unauthorized uses by third parties. A trademark is a symbol that identifies the source of a product.[97] Under the classic economic analysis of trademark law, investment in trademarks by trademark owners creates goodwill and reputation. Trademark owners invest in their trademarks by consistently maintaining a certain quality of services and products as well as by advertising to inform consumers about those products and their qualities. This investment leads to greater profits from the sales of those services and goods. Additionally, trademark also benefits consumers by saving them search costs as they can easily rely on familiar marks to find desirable services and goods. As a result, market competition in services and goods is enhanced because new market players will be incentivized to invest in their trademarks in order to attract customers to their own trademarked goods by pointing to their qualities. Arguably, such market competition is good because it can raise the quality of products and lower prices. Granting protection to trademarks is desirable from a societal perspective.[98]

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

98 *See* LANDES & POSNER, *supra* note 66, 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). *See generally* Nicholas S. Economides, *The Economics of Trademarks*, 78 TRADEMARK REP. 523 (1988) (discussing the economic benefits provided to society by legal protection of trademarks). 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). 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.").

Traditionally, there is no legal protection for trademarks unless they are being used in commerce. A trademark therefore has to be associated with either services or products that are offered in the market.[99] Thus, traditionally, ownership rights in a trademark afford its owner quasi-property rights rather than complete property rights in the mark. The courts in the United States have declared that a trademark is 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."[100]

However, during the last half of the twentieth century a great change regarding the concept of the trademark, the scope of its legal protection, as well as its value has occurred.[101] Trademarks in the twenty-first century have come to represent lifestyle symbols and fill roles other than the traditional purpose of identification. As a result they can be very valuable to their owners.[102] These changes and expansions can be nicely illustrated through the example of the Apple trademark. When the first Apple computer was released in 1976, the trademark identified the "APPLE I" computer.[103] By 2014, the trademark Apple has become a brand associated not only with computers, but with other "superior and well-integrated digital lifestyle and productivity solutions."[104] The Apple trademark alone is valued at $39.3 billion while the[105] value of Apple's brand as a whole accounts for well over half of its valuation at $153 billion.[106]

99 *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.").

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

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

102 *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.").

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

104 Apple, Inc., Annual Report 1 (Form 10-K) (Sept. 24, 2010). The term "brand" encompasses more than the trademark, it is the image and story of the company behind the trademarked product. *See* Deven R. Desai, *A Brand Theory of Trademark Law*, 1 (Thomas Jefferson School of Law Research Paper No. 1585327, 2010), http://ssrn.com/abstract=1585327. While a trademark is a source-identifying symbol that assists consumers in purchasing the product they enjoyed previously. *See* LANDES & POSNER, *supra* note 66, at 167.

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

106 *See* Millward Brown Optimor, BRANDZ TOP 100 MOST VALUABLE GLOBAL BRANDS: 2011, 5 (2011), 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.").

Along with the expansion in trademark value and meaning, trademark protection has similarly evolved greater expansion in legal rights for its owners.[107] These expansions can be seen in the broadening of the confusion standard along with the propertization of trademarks.[108] 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.[109] Most of the early American trademark cases stated this requirement and provided limited protection to trademarks. In such cases, the likelihood of confusion requirement 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.[110] The defendant's trademark needed to be identical or confusingly similar to the plaintiff's and if the plaintiff's customers were not misled by defendant's product, then the law presumed that the plaintiff suffered no harm.[111]

More recently, however, trademark law has seen a broadening or elimination of the requirement of confusion. The United States has broadened the confusion requirement. In 1962, the United States amended its federal trademark statute, the Lanham Act, to remove language that confusion was limited to the source of origin.[112] The likelihood of confusion standard currently includes not only confusion about the source of a product, but also sponsorship, affiliation, and association.[113] In addition, the U.S. Congress amended the Lanham Act

107 *See* Grinvald, *supra* note 101, at 632.

108 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).

109 *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 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.").

110 *See* McKenna, *supra* note 108, at 1848.

111 *See, e.g.*, Levy v. Walker, [1878] 10 Ch.D. 436 at 448 (Eng.) ("The Court interferes solely for the purpose of protecting the owner of a trade or business from a fraudulent invasion of that business by somebody else. It does not interfere to prevent the world outside from being misled into anything.").

112 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 (1962).

113 *See* 15 U.S.C. §1125(a)(1)(A) (2010) ("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 initial interest and post-sale confusion 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*

in 1995 and again in 2006 to include dilution, which does not require a likelihood of confusion to be actionable.[114] Although dilution is limited to trademarks that are "famous," the limitation does not stop large companies from claiming dilution as a cause of action.[115] These changes, 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.[116] Underlying this recent expansion in trademark protection is the growing legal treatment of trademarks as similar to real property.[117] The consequence of this characterization 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 wherein the owner grants the licensee permission to use her trademark in commerce. A trademark license usually identifies the trademark, the parties to the license, the trademark rights to be licensed, including the territory in which the marks are being licensed, the royalty rate of the license, the license term, the type of the license—whether it is exclusive to a single licensee or licensed non-exclusively to more than one licensee—and the quality and nature of the services and goods that the licensee may offer under the trademark. In the United States there is no legal requirement to record trademark licenses with the United States Patent and Trademark Office. Usually the licensor has to exercise quality control over a licensee's services and goods because a trademark represents the trademark owner's goodwill and reputation for services and goods of a certain level of quality and consumers tend to rely on this reputation in making their purchasing decisions. If a licensor does not exercise sufficient control over the

Confusion: Standing at the Crossroads of Trademark Law, 27 CARDOZO L. REV. 105, 150-59 (2005) (initial interest confusion).

114 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 (1996). Congress amended this act in 2006. Trademark Dilution Revision Act of 2006, Pub. L. No. 109-312, § 2, 120 Stat. 1730 (2006).

115 *See* 15 U.S.C. §1125(c)(1) (2010) ("The owner of a famous mark . . . shall be entitled to an injunction against another person who, at any time after the owner's mark has become famous . . . commences use of a mark or trade name in commerce that is likely to cause dilution by blurring or dilution by tarnishment of the famous mark . . . .").

116 *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/bayarea/article/Monster-fiercely-protects-its-name-Cable-2675907.php

117 *See* Lemley, *supra* note 108, at 895; Glynn Lunney, *Trademark Monopolies*, 48 EMORY L.J. 367, 371 (1999).

quality of the goods and services offered by the licensee, the trademark may become vulnerable to attack by the licensee or other third parties. For example, in the U.S., it may be deemed abandoned.[118]

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 forty 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.[119] 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 them 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 BCBG Max Azaria, the athletic footwear retailer Athlete's Foot, and the retail chain Sears.[120] These securitization transactions among others have turned trademarks into the most popular type of IP for securitization.[121]

C. *Patents*

The idea behind the patent system is the classic utilitarian 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 give the patentees a legal right to prevent others from copying their ideas. There have been a few theories of patent law based on 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

118 15 U.S.C. § 1127 (2010).

119 *See* Eisbruck, *supra* note 34, at 448–49.

120 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); Kaufmann, *supra* note 37, at 241.

121 *See* Glasner, *supra* note 120.

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 IP ownership to force the efficient management of inventions once they are made through licensing. This theory is based on the "tragedy of the commons" and the hypothetical world of Ronald Coase where there are no transaction costs.[122] Under this approach, a patent is not intended to operate as an incentive to invent but rather as a "prospect" system aimed at incentivizing inventors to commercialize them further and use their inventions by patenting them and using them more efficiently. Also under the prospect theory 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.[123] 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 legal scholars and economists suggests that some innovation is cumulative, where a final product results from an initial invention and also from one or more improvements to it.[124] Robert Merges and Richard Nelson have offered a "tailored incentives" model which tries to allocate rights between initial inventors and subsequent improvers. The tailored incentives approach supports competition, 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."[125] 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

122 The "Tragedy of the Commons" is an economic theory introduced by Garrett Hardin in an article written in 1968, which states that individuals acting independently and rationally according to each's self-interest, behave contrary to the best interests of the whole group, by depleting some common resource. Garrett Hardin, *The Tragdey of the Commons*, 162 SCIENCE 1243–48 (1968). *See* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J. L. ECON. 265 (1977).

123 *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).

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

125 *See* Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 875– 79 (1990).

companies have patents on components or inputs into products.[126] 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 numerous inventions.[127]

The United States Constitution provides in Article 1, Section 8, clause 8 that "the Congress shall have power . . . [t]o 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."[128] 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,[129] utility,[130] novelty,[131] non-obviousness,[132] enablement,[133] and other disclosure requirements.[134] A patent offers the patentee with a set of exclusive rights for twenty years from the filing date of the patent.[135] 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 acts [136]

A patentee generally employs a variety of means to generate revenue from her invention, such as: commercializing her invention herself or by others;[137] assigning her rights to others; or licensing her invention by granting either an exclusive or non-exclusive licenses and

126 *See* Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698, 698–99 (1998).
127 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).
128 U.S. Const. art. I, §8, cl. 8.
129 35 U.S.C. § 101.
130 *Id.*
131 *Id.* at § 102.
132 *Id.* at § 103.
133 *Id.* at § 112.
134 *Id.*
135 *Id.* at § 154(a)(2).
136 *See id.* at § 154(a)(1).
137 *See id.* at § 261.

by enforcing her rights against anyone infringing on her patent rights.[138] 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.[139] 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.[140] Unsurprisingly, when compared with holders of other types of IP rights, patentees face the greatest challenges in exploiting and commercializing their inventions. It appears that many valuable inventions do not get commercialized.[141] Additionally, empirical studies show that even when inventions are proven to be valuable, it can sometimes take decades to commercialize them successfully. Indeed, significantly less than half of all patented product inventions are commercialized. Additionally, within twelve years of issuance, more than 60% of patents lapse due to failure to renew or pay maintenance fees.[142] Because it seems reasonable to assume that viable products will survive for longer than twelve years in many industries, these low renewal rates also suggest that most inventions are never

138 *See id.* at § 154.

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

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

141 *See* Ted Sichelman, *Commercializing Patents*, 62 Stan. L. Rev. 341, 362 n.121 (2010) who provides the following data sources regarding the assertion that many valuable inventions do not get commercialized: Roger L. Beck, *Competition for Patent Monopolies*, 3 RES. L. & ECON.91, 98 (1981) (noting that about "40 to 50 percent" 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 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 . . . .").

142 *See* Sichelman, *supra* note 141, at 362 n. 122 (who provides the following data sources regarding patents renewals: 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).

commercialized.[143]

In fact, many patents today are not used as tools for generating profits on commercial products that use the patents, but instead are used for other purposes such as: (1) a defense against patent infringement lawsuits; (2) a bargaining tool in cross-licensing deals; and (3) further protection for commercialized products—patents prevent others from designing around the patented invention and selling substitute products.[144]

Interestingly, empirical evidence pointing to very low rates of licensing and enforcement of patents also suggests that patents are not commercialized extensively. About only 5% of issued patents are licensed for a royalty.[145] Moreover, less than 2% of issued patents are ever involved in litigation and 50% of those cases settle within fifteen months of being filed.[146] One interpretation of these data suggests that "most [patented] technologies will not be economically viable or commercially successful."[147] However, a number of studies indicate that many uncommercialized inventions would be successful were they 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.[148] About 40% of the patents owned by the respondents were never commercialized.[149] However, universities reported that 40% of their uncommercialized patents were "very important" or "quite important."[150] Private companies stated that

143 *See* Sichelman, supra note 141, at 362 n. 140 (who provides the following data sources regarding the assertion concerning product duration); 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).

144 *See* FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, at 26–27, 33 (2003), http://www.ftc.gov/os/2003/10/innovationrpt.pdf; 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 the major reason for patenting in the semiconductor industry during the period studied was strategic cross-licensing); Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1, 26-27 (2005); 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).

145 Lemley, *supra* note 142, 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."). *See also*, Sichelman supra note 141 at 362 n. 128.

146 Lemley, *supra* note 142, at 1501; Paul Janicke, *Patent Litigation Remedies: Some Statistical Observations* (Feb. 10, 2007), http://www.patentsmatter.com/issue/Patent_Litigation_Remedies-Janicke.ppt. .

147 *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).

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

149 *See id.* at 13, 18.

150 *See id.*

32% of their uncommercialized patents were either "quite important" or "very important."[151] In specific industries the rate of importance of the patents was even higher. In engineering companies the figure increased to 40% and in pharmaceutical and biosciences companies it increased to 34%.[152] Moreover, about 40% of the private companies stated they would like to license out their uncommercialized patents to third parties.[153] Only 33% of respondents who did not view licensing out as "attractive" said their uncommercialized inventions were of "minimal" or "no" value.[154] Finally, in a survey funded by the European Commission that generated responses from over 9,000 European inventors nearly 38% of the patents were uncommercialized by themselves or others.[155]

Thus, it seems that many patents go uncommercialized regardless of their quality. Probably, it is mainly related to 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.[156] 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.[157] One of the main goals of the survey was to understand what motivates invention and innovation among start-ups.[158] The survey also took into account the respondent companies' characteristics (background, business profile, business model, and innovation focus).[159] The findings showed that patents are most useful in the biotechnology and hardware sectors and least useful in software companies.[160] Patenting among entrepreneurs seems to be motivated mostly by the desire to prevent

151 *See id.*
152 *See id.*
153 *See id.* at 21.
154 *Id. at* 22.
155 *See* ALFONSO GAMBARDELLA ET AL., THE VALUE OF EUROPEAN PATENTS: EVIDENCE FROM A SURVEY OF EUROPEAN INVENTORS 39, 39–40 (2005), http://www.alfonsogambardella.it/PATVALFinalReport.pdf.
156 *See* David Hsu & Rosemarie H. Ziedonis, *Patents as Quality Signals for Entreprenurial Ventures* 2 (2007).
157 Stuart J.H. Graham & Ted Sichelman, *Why Do Start-Ups Patent?* 23 BERKELEY TECH. L.J. 1063, 1091 (2008).
158 *Id.* at 1091–92.
159 *Id.* at 1093.
160 Sichelman & Graham, *supra* note 5, at 158.

copying by others.[161] In descending order of importance listed by responding companies 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.[162] However, some evidence shows that the smaller startups are more reliant on patents for license revenue than the larger firms.[163] There are also differences among 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.[164] Meanwhile, when compared with other startups, biotech startups place a much higher importance on the need to generate licensing revenue.[165] Last, and importantly, the study found that the high costs of patenting are most often a barrier that prevents start-ups from seeking protection.[166]

In addition, surveys and interviews reveal patenting to be a more important tactic than previously thought which startups use to acquire capital.[167] 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.[168] It was also reported to be a strong factor among "friends and family" investors and even banks.[169] There are similar industry-related differences in the reported significance of patents to investors, with biotech investors placing more emphasis on patent portfolios than software startup investors.[170]

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,

161 *Id.* at 153.
162 *Id.* at 154.
163 *Id.* at 163–4.
164 *Id.* at 158–59.
165 *Id.*
166 *Id.* at 166–67.
167 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).
168 *Id.* at 1307.
169 *Id.*
170 *Id.* at 1308.

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 of possibilities for IP owners in the 21st century and can even serve to overcome the barrier of high-cost for raising capital under the traditional schemes for raising capital. 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. Added to these initial costs are the expenses involved in the patenting process; and then, at the more advanced stages, the production costs of the finished product and of penetrating the market. The ability to raise interim funds through securitization is essential to originators in the field of innovation.[171] The use of securitization as a funding tool allows originators to bridge significant financing gaps between the earlier stages of the idea underlying the invention and the later stages of the finished product based on the patent.[172]

Beginning in the year 2000, research universities, such as Yale and Emory, and pharmaceutical companies, securitized the flow of royalties coming from drug patents they had developed.[173] Nonetheless, it seems that the development of the securitization market for patents lags behind the securitization markets for other IP 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.[174]

III. 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 securitization.[175] One scholar even compared the activity of securitization to a type of alchemy that turns base metals into gold.[176] In this section we will further expand on and analyze the benefits of securitization of IP rights from the perspective of the holders of those

171 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).
172 Ted. M. Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341 (2010).
173 MICHAEL A. GOLLIN, DRIVING INNOVATION: INTELLECTUAL PROPERTY STRATEGIES FOR A DYNAMIC WORLD, 323–24 (2008).
174 Nikolic, *supra* note 171, at 412–13.
175 Shenker & Colletta, *supra* note 44, at 1371.
176 Schwarcz, *supra* note 4, at 134.

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.

A. *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 ratio (CAR).[177] When a bank's capital approaches the minimum capital requirement level, its ability to provide credit is limited. Moreover, bank supervisors around the world set limitations on the indebtedness of a borrower or 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.[178] 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.

B. *Lowering Financing Costs*

The use of securitization in IP is meant to significantly reduce the costs of financing for owners of IP rights.[179] Raising credit through issuing asset-backed securities is based on the isolation of the IP 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.[180] Originators who struggle to raise credit cheaply in traditional ways, such as through bank loans or issuing corporate bonds, are able to utilize quality IP rights in their possession to that end. Securitization of IP rights allows originators to raise credit relatively cheaply, since the level of interest that investors demand for investment in asset-backed securities derives from the characteristics and qualities of the IP rights backing the securities and is not dependent on the risks involved in the overall business activities of the originator. Therefore, the use of

177 *See supra* note 21 and accompanying text.
178 *See supra* note 24 and accompanying text.
179 Kaufmann, *supra* note 37, at 241–42.
180 *See supra* notes 21–23**Error! Bookmark not defined.**.

securitization as a means of financing generally allows the owners of the IP rights to reduce the cost of raising credit.

C. *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.[181]

D. *Maintaining Ownership Rights in the Originator*

An originator who securitizes royalty income streams from IP rights is not separated from her rights; rather, the royalty income streams revert to her possession when the asset-backed securities are fully repaid.[182] 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 from his music sales.[183] It seems that the advantage of the maintenance of ownership rights in the hands of the originator is especially significant in the world of IP because it allows the originator to use her IP rights while licensing parts of its rights to others on a variety of different terms.

E. *Diversification of Investment Tools*

From the perspective of the investment community, the securitization of IP rights increases the welfare of the capital market by diversifying investment tools.[184] The creation of new investment channels in the capital market—investment in securities backed by IP rights—allows for diversification of investments.[185] 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 IP 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

181 Glasner, *supra* note 120, at 33.
182 Grant, *supra* note 85, at 1296–97.
183 Sylva, *supra* note 88, at 204.
184 FRANKEL, *supra* note 20, at 167.
185 Ellis, *supra* note 20, at 301.

market that derive from the underlying cash flow of the securitized assets themselves. In a process of financial engineering, the royalty flow coming from the IP 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 IP 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 IP rights into sub-streams and the divisions may be as complex as desired.

This division into sub-streams allows for the creation of a diverse series of securities that can satisfy the needs and preferences of different types of investors.[186] For example, different maturities appeal to different investors: long term securities appeal to pension funds, while short term securities appeal to 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 IP-backed securities creates added value over and above direct investment in IP 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 financial engineering process leads to the sum of parts being greater than the whole itself.[187]

F. *Removal of Barriers to Entry in Investment in Intellectual Property*

Investment in the IP 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.[188] These factors create serious barriers to entry for investment in the field. The securitization process, which turns illiquid

186 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).

187 Shenker & Colletta, *supra* note 44, at 1428.

188 Fernandez, Stein & Lo, *supra* note 30 (discussing the advantages of employing securitization in biomedical research compared to other traditional venture capital financing).

IP assets into asset-backed securities that are regularly traded in financial markets, removes a portion of the barriers.[189] First, the purchase of IP backed securities allows smaller investors to invest in the IP world without requiring large amounts of money. Since the securities are backed by a large pool of IP rights, smaller investors are able to benefit from investment diversification despite their relatively low level of investment.[190] Second, the rating of IP-backed securities by credit rating agencies allows investors to make intelligent investment decisions without requiring them to have personal knowledge or special expertise.[191] Credit ratings increase the transparency of the information in the market, significantly lower the cost of investment in the IP field, and allow even unsophisticated investors to take part in the investment. The securitization market therefore increases investor accessibility to IP investments and removes barriers to entry for investment in the field.[192]

G. *Supporting Investment in Research, Development and Creativity*

The securitization market of IP 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 IP rights easily and generate income quickly 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 yield new innovation.[193] These newly created IP rights can be securitized in turn, thus promoting the public interest of expansion and diversification of the creativity and innovation sector.

IV. CHALLENGES TO THE INTELLECTUAL PROPERTY SECURITIZATION MARKET

A. *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, collapsed following the revelation that the company misrepresented

189 GOLLIN, *supra* note 173, at 324–25.
190 Edward J. Janger, *The Death of Secured Lending*, 25 CARDOZO L. REV. 1759, 1769–70 (2004).
191 Shenker & Colletta, *supra* note 44, at 1401–02.
192 *Cf.* Jonathan Remy Nash, *Environmental Superliens and the Problem of Mortgage-Backed Securitization*, 59 WASH. & LEE L. REV. 127, 141–42 (2002) (discussing the impact of mortgages' securitization on the barriers to entry to the real estate investment market).
193 GOLLIN, *supra* note 173, at 325; Nikolic, *supra* note 171, at 409.

profits and hid losses.[194] The investigation into Enron's collapse revealed that the company had made use of many hundreds of SPVs and off-balance-sheet practices to conceal its liabilities from public scrutiny.[195] Enron 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 SPVs in the securitization process.[196] Indeed, the huge public outcry 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 enabled originators and SPVs to misrepresent securitization transactions to third parties.[197] 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 SPV and off-balance-sheet transactions.[198]

Furthermore, in the past few years, global financial markets have experienced a crisis. In academic and popular discourse the cause of the

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

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

196 *See* Janger, *supra* note 190, at 1773. For an approach that looks at the substantive differences between Enron's manipulative use of SPVs and their 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).

197 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 § 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. L. REV., Mar. 2002, at 6; Kettering, *supra* note 12, 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); Dov Solomon, *The Rise of a Giant: Securitization and the Global Financial Crisis*, 49 AM. BUS. L.J. 859, 866-68 (2012).

198 Sarbanes-Oxley Act of 2002, Pub. L. No. 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. SEC. AND EXCH. COMM'N, 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/soxoffbalancerpt.pdf.

crisis has commonly been ascribed to securitization.[199] The main criticism focuses on the disconnect securitization mechanisms create 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.[200] The claim is that securitization allows the originator to exploit the information gap between herself and investors in ABSs in order to pass on the hidden risks in the securitized assets to others without fully accounting for those risks 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 credit rating agencies for their role in the crisis and stressed the limits of rating technologies in assessing the complex financial instruments created in the securitization process.[201] The crisis revealed the lack of transparency in the rating process and the delayed response of the credit rating agencies to events that should have lowered ratings. Furthermore, researchers recognized a lack of independence in the rating companies and pointed out distortions in their incentive structures and the conflicts of interest they created.[202] Indeed, in response to the failures of credit rating agencies found in the course of the crisis, in July 2010 the U.S. Congress named itself regulator of the credit rating field as a part of the

199 *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, 205 (Robert W. Kolb ed., 2010) (discussing the role of securitization in the 2007–08 global economic crisis); TIMOTHY F. GEITHNER, FIN. STABILITY OVERSIGHT COUNSEL, MACROECONOMIC EFFECTS OF RISK RETENTION REQUIREMENTS 10–14 (Jan. 2011), 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 1 (George Constantinides et al. eds., 2012) (arguing that securitization played a major role in the global economic crisis and explaining the reasons for that); Solomon, *supra* note 197 (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).

200 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 15, at 541–45.

201 Joshua Coval, Jakub Jurek & Erik Stafford, *The Economics of Structured Finance*, 23 J. ECON. PERSP. 3 n.1, (2009).

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

comprehensive financial reform, the Dodd-Frank Act.[203]

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 IP,[204] it is widely believed that IP 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.[205] However, in the next paragraphs we point to obstacles that stand in the way of continued development of the securitization market for IP and we attempt to offer effective solutions for overcoming them.

B. *Securitization of Intellectual Property Rights*

For many reasons, the securitization of IP is not always feasible. The discussion that follows highlights these reasons, touching upon the challenges posed by securitizing IP and discussing problems inherent in the asset to be securitized (intangible goods), the challenges of IP 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 IP rights is characterized by high volatility. The value of IP rights may be sharply affected by changes in the tastes or preferences of the general public, fads, by technological changes, or by the legal environment. This potential volatility adds dimensions of complexity and risk to securitization transactions in the IP field and makes pricing the transactions difficult.[206] Additionally, all IP rights can be challenged and invalidated based on different grounds. For example, patents are presumed to be valid.[207] However, they can be invalidated based on different grounds such as lack of novelty, obviousness, disclosure problems and other reasons.[208] There are also some major

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

204 Kaufmann et al. *supra* note 37, at 249 (emphasizes 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).

205 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, 461–63 (2011).

206 Eisbruck, *supra* note 34, at 443.

207 35 U.S.C. § 282(a) (2006).

208 *Id.* § 282(b).

specific challenges to securitization of patents stemming from the quality of patents issued by the U.S. Patent and Trademark Office that raise great concerns pertaining to the validity of issued patents.[209] These quality concerns point to many flaws with the patent system, the vagueness of patent law doctrines, and other factors, which result in the Office issuing vague patents whose scope cannot necessarily be determined in advance, thus affecting the feasibility of securitization.[210] While the U.S. patent system has recently gone through major patent reforms under the America Invents Act,[211] major problems still challenge the quality of prosecution and enforcement of patent rights. Indeed, nearly half of all litigated patents are held invalid.[212] Similarly, trademarks may be challenged based on different grounds, such as an argument that the trademark has become generic.[213]

Moreover, IP infringement detection and enforcement are also challenging to securitization. Copyright and trademark infringement have become very widespread in recent years, especially in the internet environment.[214] Widespread infringement significantly affects the value of IP rights and the expected returns from securitizing such assets, especially musical and cinematographic works as well trademarked goods, which are subject to file sharing and counterfeiting, respectively.[215]

These factors 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, IP 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 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

209 JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATION AT RISK, 3 (2008).
210 *Id.* at 46–72.
211 The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).
212 Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, J. ECON. PER. 75, 76 (2005) ("The risk that a patent will be declared invalid is substantial. Roughly half of all litigated patents are found to be invalid, including some of great commercialsignificance.").
213 15 U.S.C. § 1064 (2006).
214 Miriam Bitton, *Rethinking the Anti-Counterfeiting Trade Agreement's Criminal Copyright Enforcement Measures*, 102 J. CRIM. L. & CRIMINOLOGY 67–68 (2012).
215 *Id.* at 67.

the economic success of the film has already been established. Similarly, trademarks can also be securitized at the phase where their economic value is known and stable. Moreover, film studios securitize entire catalogs of their films and thus diversify risk. Likewise, securing financing using patents usually requires a portfolio of patents. It follows that securitization of patents will also require a portfolio of patents.

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.[216] The 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 on inventions that are simply improvements rather than breakthrough pioneering inventions.[217] It is also important to note that the commercialization potential of an invention, even very important ones, is not always clear up front, 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.[218]

Even older patents are not immune to the risk that revenues will change over time. 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.[219] 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

216 Glasner, *supra* note 120, at 61–63; Nikolic, *supra* note 171, at 413–19 (discussing different valuation methods for patents).
217 Jacobs, *supra* note 205, at 458.
218 Eisbruck, *supra* note 34, at 445.
219 Jacobs, *supra* note 205, at 459.

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 patents can actually block other companies from using innovative newer technologies, even patented ones, and require licenses in order to practice the newer 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 barriers to entry; the strength of the brand name associated with the patent; and the presence of diverse applications and uses for the patent.[220]

An additional way to lower the risk involved in the transaction is to securitize a patent portfolio rather than just a lone patent.[221] 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.[222] 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 IP field stems from the fact that the rights granted to the IP 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 IP ownership is limited in time. For example, a copyright is generally

220 Eisbruck, *supra* note 34, at 446.
221 Nikolic, *supra* note 171, at 411–12.
222 Parchomovsky & Wagner, *supra* note 144.

valid until seventy years after the death of the author of the work.[223] Patents are even more limited—twenty years from the date that the application for the patent was filed.[224] When the period of protection is up the rights expire, the work of authorship or invention enters the public domain, and all are free to use it. Therefore, securitization of future royalty streams deriving from IP 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 IP 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 maturity date of the bonds.[225]

Another hurdle facing the development of the IP securitization market is the division of IP rights between different parties. 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.[226] Each of these legal rights separately allows for the generation of profits from the work. 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.[227] 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 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 IP is challenging for additional reasons. There

223 17 U.S.C. § 302 (2006).
224 *Id.* § 154(a)(2).
225 Eisbruck, *supra* note 34, at 448.
226 *See supra* notes 69–76 and accompanying text.
227 Lital Helman, *When Your Recording Agency Turns into an Agency Problem: The True Nature of the Peer-to-Peer Debate*, 50 IDEA 49 (2009).

exist many challenges regarding valuation of IP, 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.[228] 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.[229] In contrast to tangible assets, valuation of IP 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.[230] In fact, by definition, patents must be novel and unique.[231] Finally, there are many external factors that can influence the value of such intangible assets.[232] 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.[233] 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 future benefits deriving from the patent.[234] 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 unique by definition and hence the transactions pertaining to them are dissimilar.[235] Additionally, specific details pertaining to transactions are difficult to obtain because of the secretive nature of many patent transactions.[236] IP exchanges may be a helpful tool for market-based valuations. By increasing transparency and making market prices

228 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).
229 *Id.*
230 Maayan Perel, *An Ex-Ante Method of Patent Valuation: Transforming Patent Quality Into Patent Value,*16(2) J. HIGH TECH. L. 148, 163–64(2014).
231 Michael S. Kramer, *Valuation and Assessment of Patents and Patent Portfolios Through Analytical Techniques*, 6 J. MARSHALL REV. INTELL. PROP. L. 463, 465 (2007).
232 *Id*. at 466.
233 Robert Pitkethly, *The Valuation of Patents: A Review of Patent Valuation Methods with Consideration of Option Based Methods and the Potential for Further Research* 12 (Judge Institute Working Paper WP 21/97, 1997).
234 Meeks & Eldering, *supra* note 228, at 202.
235 Josh Lerner & Anne Layne-Farrar, *Valuing Patents for Licensing: A Practical Survey of the Literature* 8 (Working Paper, Mar. 3, 2006), *available at* http://ssrn.com/abstract=1440292.
236 Meeks & Eldering, *supra* note 228.

available, valuing patents becomes much less difficult.[237] 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.[238]

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 IP valuation. One example is the adaptation of the Black and Scholes equation by Denton and Heald for patent pricing.[239] The benefit of these methods is that they take into account possible future risks and are flexible enough to be adapted for different possibilities.[240] 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 of the underlying assets.[241] Once again, this may be an instance where patent exchanges can be instrumental in providing data.[242] 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.[243] This method of data analysis is 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.[244]

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 the general category of "goodwill".[245] This measure of the total value of intangible assets is

237 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).
238 Pitkethly, *supra* note 233, at 8.
239 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, 1208 (2007).
240 Pitkethly, *supra* note 233. at 10.
241 Lerner & Layne-Farrar, *supra* note 235, at 12.
242 Meeks & Eldering, *supra* note 228.
243 *Id.*
244 Kramer, *supra* note 231, at 467.
245 Fernando Torres, *Trademark Values in Corporate Restructuring*, 3–4 (July 1, 2007), *available at* http://ssrn.com/abstract=1014741.

found by subtracting a company's total hard assets from the total market value of a company, leaving just the intangible assets.[246] As in patents, the 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 it,[247] though recognition and the associated trademark value is often related to promotion costs.[248] The income method uses the projected annual profit from the brand and works backward to figure out what percentage of the income is attributable to the trademark.[249] One method of figuring out the percentage attributable to the trademark is by looking at royalty rates charged for use of the trademark.[250] 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.[251] Copyright valuation also poses similar difficulties to those raised by patent and trademarks valuation. Copyrights are evaluated using the same methodologies already described: cost, income, or market approach. Any attempt to open the securitization market to IP requires addressing these challenges.

Aside from these valuation challenges, it is important to note that securitization introduces significant transaction 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 valuation costs, companies' formation costs, issuance costs and more.[252] These costs, however, are usually internalized in the costs of securitization in a way that does not introduce additional independent costs into the process. Furthermore, 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

246 Michael J. Freno, *Trademark Valuation: Preserving Brand Equity*, 97 TRADEMARK REP. 1055, 1057 (2007).
247 *Id.* at 1058.
248 *Id.* at 1059.
249 *Id.* at 1060.
250 *Id*. at 1061. *See also* Michael A. Einhorn, *Trademark Valuation and Market Analysis* (Feb. 5, 2014), *available at* http://ssrn.com/abstract=2391470 (working paper).
251 Freno, *supra* note 246, at 1062.
252 *See* Jonathan C. Lipson, *Re: Defining Securitization* 85 S. CAL. L. REV. 1229, 1245–46 (2012) (suggesting that in light of the complexity of the securitization transaction it requires a careful analysis by the different entities which are involved in it, such as lawyers, rating agencies, and investment banks, and that such analysis generally involves high costs); Steven L. Schwarcz, *The Alchemy of Asset Securitization*, 1 STAN. J. L. BUS. & FIN. 133, 138 (1994) (suggesting that a securitization transaction involves high costs, including the need to form a special purpose vehicle and meet the minimum capital requirement).

many people holding bonds backed by securitized assets, 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.

Securitization can also be challenging in the IP field where it is done nationally and globally. The U.S. has regulated the IP field through federal and state law. While patents and copyrights are regulated exclusively through federal law, trademarks are additionally regulated through state law.[253] 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 IP 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 IP rights.[254] 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),[255] databases protection under copyright law,[256] and many more. There also exist differences in recording ownership rights in IP which can affect securitization. While most countries provide for a system of recording patents and trademarks, no mandatory system for recording rights exist in relation to copyrights in most legal systems. These institutional and regulatory differences, in turn, can introduce additional uncertainty regarding the ability to securitize different IP rights nationally and globally.

Last, IP 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 7,[257] or reorganization under Chapter 11.[258] 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

253 U.S. CONST. art. I, § 8, cl. 8 allows for preemption of state law only in the case of patents and copyrights.

254 The Preamble to the TRIPS Agreement states: "*Recognizing*, to this end, the need for new rules and disciplines concerning . . . the provision of effective and appropriate means for the enforcement of trade-related intellectual property rights, taking into account differences in national legal systems." Agreement on Trade-Related Aspects of Intellectual Property Rights, 1869 UNTS 299; 33 ILM 1197 (1994).

255 Kelvin W. Willoughby, *How Much Does Technology Really Matter in Patent Law?: A Comparative Analysis of Doctrines of Appropriate Patentable Subject Matter in American and European Patent Law*, 18 FED. CIR. B.J. 63 (2008).

256 *See generally* Miriam Bitton, *A New Look on the Economic Dimension of the Database Protection Debate*, 47 IDEA 93 (2006).

257 11 U.S.C §701–84 (2006).

258 *Id.* §1101–74 (2006).

or rejecting executory contracts.[259] The term "executory contract" is not defined by the law but the most commonly accepted definition is the Countryman Material Breach (hereinafter "Countryman") definition which provides that it is a "contract under which the obligation of both the bankrupt and the other party to the contract are so far unperformed that the failure of either to complete performance would constitute a material breach excusing performance of the other." [260] Most IP licenses fall under the Countryman definition as unperformed contracts, but not all do.[261]

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*,[262] Congress enacted Section 365(n).[263] 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 Section 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 Section 365(n) does offer some essential protections for IP licensees, there still exist a number of challenges regarding securitization. First, the protections found in Section 365(n) apply to IP rights as defined in the Bankruptcy Code.[264] Patents, copyrights, and trade secrets are all included but trademarks are not. Therefore, trademark licenses are left with no protection. Although Congress

259 *Id.* § 365(a) (2006) ("[T]he trustee, subject to the court's approval, may assume or reject any executory contract or unexpired lease of the debtor.").

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

261 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).

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

263 S. Rep. No. 100-505, at 1 (1988) ("The purpose of the bill is to amend Section 365 of the Bankruptcy Code to make clear that the rights of an intellectual property licensee to use the licensed property cannot be unilaterally cut off as a result of the rejection of the license pursuant to Section 365 in the event of the licensor's bankruptcy. Certain recent court decisions interpreting Section 365 have imposed a burden on American technological development that was never intended by Congress in enacting Section 365. The adoption of this bill will immediately remove that burden and its attendant threat to the development of American Technology and will further clarify that Congress never intended for Section 365 to be so applied.").

264 11 U.S.C § 35(a) (2006).

intended to revisit the issue of trademarks, it never did.[265] At the same time, Congress charged bankruptcy courts with "development of equitable treatment of this situation False"[266] Bankruptcy courts were caught between the letter of the law in Section 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.[267] For many years courts simply followed Section 365(n) and left out trademarks.[268] 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.[269] The court circumvented Section 365(n) and provided protection to trademark licensees through Section 365(g).[270] The court held that rejection of executory contracts can be considered a breach of contract and under Section 365(g) the rights of licensees to use the trademark would not be terminated.[271] Second, the Court found that Section 365(n) only applies to IP rights as defined by the bankruptcy code.[272] It includes "works of authorship protected under Title 17" of the United States Code. Title 17 protects foreign works when the US and other countries have a treaty.[273] It is not clear, however, how the statute would be interpreted in all cases of foreign copyrights.[274] 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 research and development.[275] Menell argues that amending Section 365(n) to include future improvements would be very beneficial and at a minimal costs to

265 S. Rep. No. 100-505, at 5 (1988) ("Since these matters could not be addressed without more extensive study, it was determined to postpone congressional action in this area and to allow the development of equitable treatment of this situation by bankruptcy courts."); *Sunbeam Products Inc. v. Chicago American Manufacturing*, 686 F.3d 372, 375 (7th Cir. 2012) (noting that "[t]he subject seems to have fallen off the legislative agenda, but this does not change the effect of what Congress did in 1988.").

266 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").

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

268 Zachary S. McKay, *A Dramatic Misconception: Why the Trademark Licensee Must Be Granted the Power to Overcome the Trustee in Bankruptcy's11 U.S.C. Rejection*, 54 S. TEX. L. REV. 747, 766 (2013).

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

270 *Id.* at 373.

271 *Id.* at 377.

272 11 U.S.C § 35A (2010).

273 17 U.S.C. § 104 (2010).

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

275 *Id.* at 780–83.

bankrupt licensors.[276]

A few scholars offered a number of potential ways to protect licensees above and beyond Section 365(n) (or in the case of trademarks, to protect them in the first place). For example, Cieri and Morgan[277] offered some drafting tactics such as including a right to improvements, reduced royalty payments, liquidated damages clause, and other provisions.[278] Others have 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 with a secured claim for rejection damages. Any profit the licensor gets by rejecting the contract would immediately go to the licensee.[279]

These IP licensing challenges 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 IP of the seller.[280] 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.[281] 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 licensed IP. 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

276 *Id.* at 784.

277 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 BUS. LAW. 1649 (2000).

278 *Id.* at 1680–84.

279 *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).

280 JASON H.P. KRAVITT, 1 SECURITIZATION OF FINANCIAL ASSETS 5-213 to 5-217 (3rd ed. 2013).

281 Ronald S Borod & Thomas J Cassidy, *Clearing the Hurdles for IP Securitization in the US*, 14 INTELL. ASSET MANAGEMENT 57–58 (2005) (discussing IP securitization transactions in bankruptcy).

securitization of IP assets.

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

CONCLUSION

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 IP 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 IP rights, including the securitization of trademarks and patents.

In the information age, IP rights are a significant component of the GDP of developed countries. The centrality of IP rights in the modern economy is expressed, *inter alia*, by their growing use as a means of financing. Securitization allows for the capitalization of IP rights that yield a foreseeable royalty stream in order to raise interim funds for business activities. The securitization of IP 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 IP 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 IP rights and analyzes future challenges for the IP market. In future work we will plan to address the specific challenges raised by each field of IP and offer some workable frameworks for addressing them.