



Economic
Research
Working Paper
No. 74/2023

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September 21, 2023

Abstract

This paper offers a primer on the basic economics of film finance and standard practices in the U.S. movie industry. It takes the U.S. movie industry as a case in point to study how excess risk and uncertainty around financing new projects are processed and managed by private sector entities and what market-based solutions are developed to prevent market failure. The paper summarizes the most common types of financial deals on the ground and reoccurring funding sources for new content production and distribution in the past twenty years. In particular, this research discusses the prominent role of intellectual property (IP) in financial transactions in the audiovisual sector. Research findings are based on a series of semi-structured interviews, commissioned expert memoranda, and a dedicated panel held with selected industry experts in November 2022. In addition, we conduct exploratory analysis and provide descriptive evidence on credit and intangible collateral use in the industry using data from Uniform Commercial Code (UCC) filings and official IP registers. In light of the digital transformation of the audiovisual sector, the research documents industry trends and the most recent changes in the financing of U.S. film. We conclude with an outline of generic policy options for an upgrade of the financing environment in the U.S. and beyond.

Keywords: movie industry, finance, intellectual property, collateral, loan, digitization.

JEL Classification: G20, L82, O34, Z11

*The views expressed are those of the authors, and do not necessarily reflect the views of the World Intellectual Property Organization or its member states. The authors would like to thank Robert Brauneis, Joseph Calabrese, Carsten Fink, Bill Grantham, Michael Kos, Brent Lutes, Allison Mages, David Nimmer, Guy Pessach, Bernd Riefler, Xiyin Tang as well as workshop participants at WIPO. Copyright related data made publicly available by the U.S. Copyright Office is gratefully acknowledged.

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1 Background and related literature

Movies often require large-upfront investment and title success is hard to predict, even with more data becoming available in the digital age (Caves et al., 2000). Still, with the many blockbusters created in the last couple of years and the rise of streaming services, the global film industry is booming and keeps attracting significant outside investment.

For example, the top 1000 movies alone generated a total U.S. box office income of U.S. Dollar (USD) 166 billion and required a total investment and overall budget of USD 112 billion, with the oldest movie released in 1937.¹ As Figure 1 illustrates, over the last 40 years of movie production history, the average revenue generated per title was approximately USD 20 to 60 million, with a steadily increasing, average production budget ranging between USD 20 to 60 million in the same period (yearly averages in absolute and real terms, cf. Figure 2). Based on the data, we calculate and plot domestic carrying capacity of the average title released in a given year in Figure 3. This can help approximate investment profitability and is defined as the ratio between domestic box office income from theatrical release to production budget as reported in the data. Even though the data is incomplete for various reasons,² investment in film can be highly lucrative as successful titles

¹The numbers are derived from web-scraping the The-Numbers chart website in November 2022. We report inflated USD (millions) \$ based on the annual average Consumer Price Index (All Urban, All Items, U.S. City) average around the year 2021. The larger data sample (compared to the top 1000 titles) is furthermore restricted to movies released between 1980 and 2022. It is important to note that the data is based on a chart list of the most successful movies of all times in terms of their U.S./domestic box office income. Hence, it is biased towards more popular titles and does not well reflect investment and revenue generated for smaller and less successful movie projects, including those not completed or released.

²Note that underlying measures of income and budget for these more popular film titles are imperfect for various reasons and hence domestic carrying capacity ratios warrant cautious interpretation. First, domestic box office income does only reflect part of the overall income generated by a film, in particular with the rise of digital channels in more recent years. It does not take into account multiple other sources of potential income (e.g. income from online streaming, abroad

seem to recoup (at the minimum) 2 to 3 times the core investment they require upfront (production budget). At the same time, given that domestic carrying capacity has been strongly fluctuating over the course of the last 40 years (and, more recently, declining), it becomes clear that potential high-return investment in U.S. film can be a very risky undertaking. Notably, many successful films rely on external finance and they would not have been realized (or would have been produced on a much smaller budget) if companies had been restricted to using their own funds. However, as bankruptcy and project failure is still not uncommon in this high-risk media industry - something that the box office/budget data cannot account for -, industry players have found smart ways to make risks more manageable and help generate sufficient film funding from outside.

Based on expert interviews and exploratory data analysis of lending markets, this paper investigates current standard financing practices in the U.S. movie industry. Over the years, the film financing market has seen much experimentation and the coming and going of many new forms of finance. The paper looks at the role of intellectual property (IP) as an enabler of many financial deals in the industry, for example, loans using IP assets as a collateral. In particular, we ask what are best practices in financing film, and who are the key stakeholders in the U.S. landscape? From a policy perspective, we investigate what may be done to improve access to film finance and further leverage IP assets to build an even stronger industry. The overall direction of the research is to provide factual evidence on financial deals and current U.S. practices. This will help inform the public policy debate on financing film and financing of large projects in other creative sectors in the U.S. and other

distribution, television, merchandising, physical video sales, etc.). Second, box office income is typically split between producers/studio and exhibitors/distributors, for example, on a 50% to 50% basis. Third, there are many other expenses and substantial cost to realizing box office that are not (or not well) reflected in production budget figures reported in the data, most notably 'print and advertising' (P&A) costs.

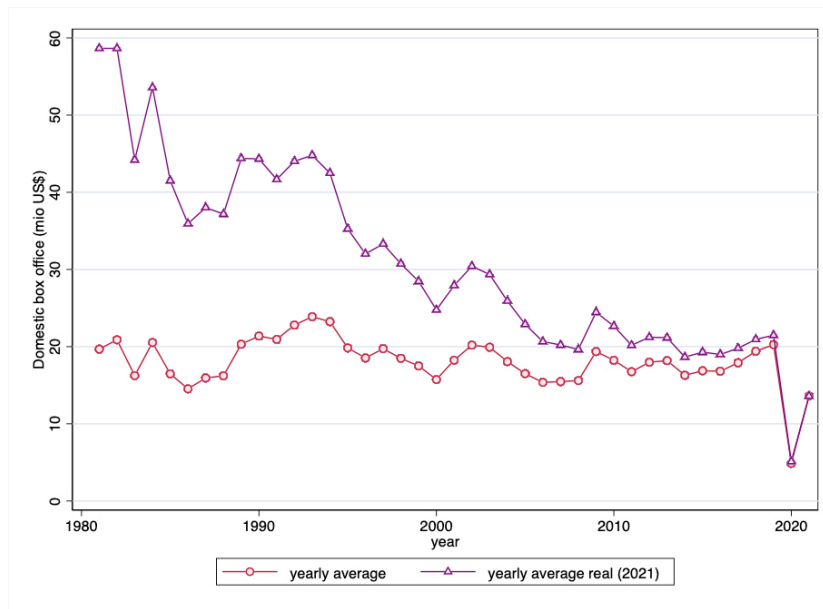


Figure 1: Movie Trends: Box Office U.S.

Note: This figure shows the domestic box office yearly average. US\$ inflated using the *STATA* command *inflate*, based on the annual average Consumer Price Index All Urban, All Items, U.S. City average around the year 2021. Data derived from The-Numbers charts in November 2022. N= 17'800 movies.

countries.

The movie industry has always been a front-runner when it comes to the use of IP assets as collateral in lending deals. As alternative collateral use (in the form of tangible assets, etc.) is naturally restricted in this industry and often not available to companies seeking credit, this comes as no surprise and makes it an interesting industry case study for IP use in finance. An important distinction we draw in this research is between single-project financing of mostly independent film making and (corporate) film finance of major studios and streaming services, of which the latter typically relies on higher investment volumes and longer lines of credit.³ Hence, in what follows, we can make the distinction between loans granted for the

³Accordingly, even though important at early career stages and market entry, financing of smaller budget film gathered from personal networks of friends and family, as well as money collect on crowdfunding platforms are outside the scope of this study (Leboeuf and Schwienbacher (2018); Mollick (2014)).

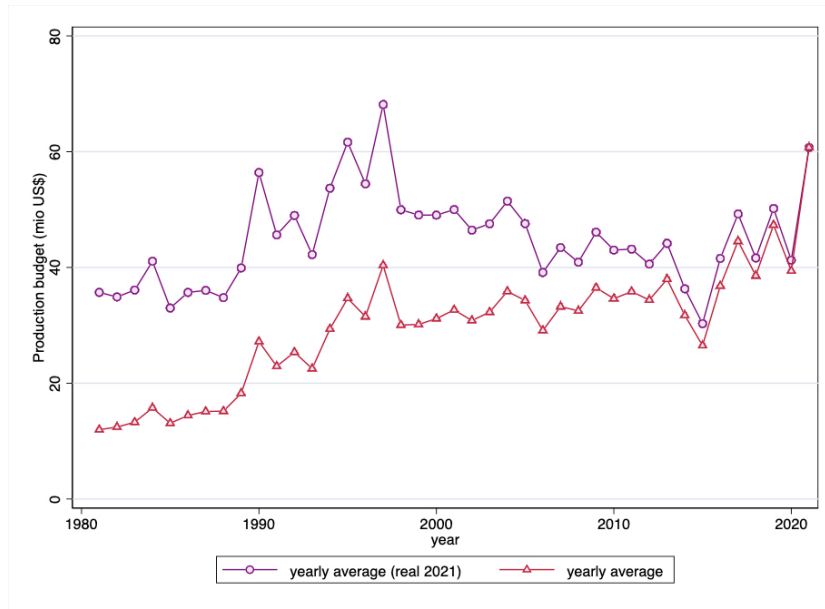


Figure 2: Movie Trends: Production Budget

Note: This figure shows the movie production budget yearly average. US\$ inflated using the STATA command *inflate*, based on the annual average Consumer Price Index All Urban, All Items, U.S. City average around the year 2021. Data derived from The-Numbers charts in November 2022. N= 6'341 movies.

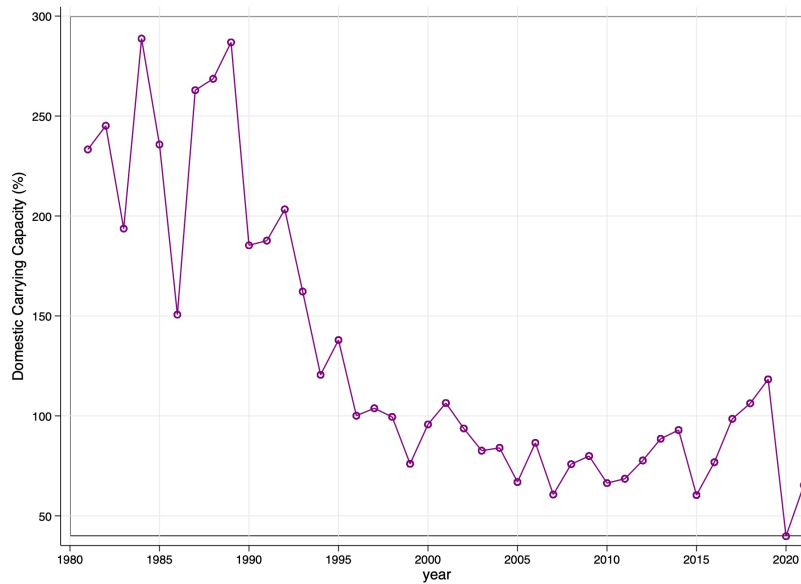


Figure 3: Movie Trends: Domestic Carrying Capacity

Note: This figure shows the domestic carrying capacity, calculated as: (domestic box office USD / production budget*100, yearly median, in USD). Data obtained from The-Numbers charts in November 2022. N = 5,946.

initial production of a movie versus equity investment and lines of credit backed by completed film and future receivables on existing catalogue used in future studio productions. The U.S. context for film finance is equally important in our research as, beyond the provisioning of tax incentives to productions and investors, public funding is largely insufficient to fully finance films in the U.S. Accordingly, most films rely greatly on private sector finance. This starkly differs from the situation in other countries (e.g., in Europe) where government is the main funding source (La Torre (2014)).

Related to this paper, there are a number of pioneering works that describe key financing mechanisms in the movie industry and how they have evolved in light of technological changes that keep transforming the industry (Ravid (2018); Phillips (2004); Hjort (2012); La Torre (2014); Moullier (2022); Aft (2022)). The existing literature on film finance may be viewed as focusing either on the demand or supply side.⁴ On the demand side, previous studies focused on the determinants of box office revenues, such as the role of reviews (Brown et al. (2013)); the impact of stars (Hofmann et al. (2017)); and the relevance of sequels (Lampe and Pancs (2020)). In the same context, another strand of literature deals with box office revenues predictions using econometrics and machine learning techniques (see, among others, Lui and Xie (2019)). On the supply side, studies on movies production in the U.S. film industry, such as De Vany and Walls (2002) find that reallocating production investment from R-rated films to other segments could reduce the risk profile of the investment. Meanwhile, using a comparative approach between U.S. and Italian film industry, Sacco and Teti (2021) investigate production risk reduction using portfolio strategies. Several studies investigate movie distribution from different perspectives, such as: type of distribution (Prieto-Rodriguez et al. (2015)); release

⁴For an exhaustive literature review see McKenzie (2022).

date (Belleflamme and Paolini (2019)); distributor choice (Zhang et al. (2019)); and timing of the international release relative to the domestic market (Cabral and Natividad (2020)). Yet other research studies exhibition contracts between cinemas' managers and distributors and their economic implications (see, among others, Baranchuk et al. (2019), and Barron et al. (2019)). Finally, another stream of the literature has dealt with the impact of digitization on the film industry. For example, Benner and Waldfogel (2023) argue that, with the decline in costs for digital distribution and cost advantages over theatrical distribution (Sorenson and Waguespack (2006)), and the global shipping of local content (Aguar and Waldfogel (2018)), upcoming movie producers more than major studios can now reach smaller and more dispersed audiences with their niche and medium-level budget film titles. In this context, new financing opportunities such as IP-backed loans, crowdfunding or the availability of 'fresh money' with the entry of streaming services could provide for an alternative explanation of the surge in movie supplies observed in the digital age (Waldfogel (2017)). A related stream of the financial literature has looked at the impact of digitization on the banking sector more broadly. For example, previous studies have documented the rise of electronic banking and subsequent changes in banks' risk management techniques and bank profitability in light of digital changes in the industry (Pennathur (2001); Sullivan et al. (2000); Furst et al. (2000)).

Unlike prior studies, this paper takes a multi-stakeholder approach to U.S. film finance. In this sense, we focus on producers, distributors and financiers and present not only their incentives, but also visualise the main tools which these key actors use to mitigate or transfer risk amongst themselves or to third parties. In doing so, we continue to highlight the uniquely important role of major studios in the U.S. film industry, while as well shedding light on the crucial roles and perspec-

tives of non-studio actors. In addition, we discuss the growing role of streaming services in the film industry. As competition from streaming services continues to dig into the profit margins and reduce the market power of major studios, a multi-stakeholder understanding of the roles, incentives and risk management strategies of industry stakeholders becomes increasingly important for policymakers.

The remainder of the paper is structured as follows. Section 2 provides a conceptual framework for risk and market failure in general financing markets and film finance in particular. Sections 3 and 4 explain basic types of film finance and principal actors involved in U.S. deals, Section 5 describes original risk mitigation devices developed in the sector. Section 6 describes recent changes in the U.S. film industry and explores novel data related to lending markets, Section 7 identify policy levers for the industry, and Section 8 concludes. Throughout the text, reference is made to individual expert interviews coded and listed in Table 1 of the Appendix.

2 Conceptual framework: Risk and uncertainty in financing markets

Financing markets enable trade between those that seek funds and those willing to invest. In a competitive market environment, ideally, funds are efficiently allocated to the most promising investment opportunities, based on the assumption that information is perfect and supply and demand for funds determine interest rates (Besley (1994)). In reality, however, this is rarely the case as not everyone will have access to the same information and information in itself may be incomplete. In credit markets in particular, trading happens under uncertainty. Lenders are exposed to default risk as their investment might turn out to not be commercially

successful and borrowers might be unable to deliver on loan obligations. For the reason that borrowers might sometimes be unwilling to repay loans, credit markets will also require costly monitoring and enforcement making sure funds are used wisely and along the lines outlined in lending contracts. Note that lending as such can also increase incentives on the side of the borrower to increase risk-taking in activities as, with the loan commitment and transfer of risk, the lender now effectively shares some of the risk that the project fails, bearing the cost of the loan (i.e., the standard moral hazard and adverse selection problems arise, as described in Jaffee and Russell (1976) and Stiglitz and Weiss (1986)). If monitoring costs are too high or good information on the borrower's reliability is not available, lenders may simply cease to lend or choose not to serve some potential borrowers. Alternatively, lenders can raise interest rate by charging a higher risk premium, or by rationing credit and keeping interest rates fixed (Stiglitz and Weiss (1986)). Again, this will cut off some borrowers seeking funds. This can give rise to the most basic form of market failure in the provisioning of funds.

If, however, one accepts that information is incomplete in financing markets and to some degree constrains the provisioning of credit, there are still multiple other reasons why market failure can emerge (Besley (1994)). These reasons, which we'll explain in the following paragraphs, also make the film industry a case in point to study U.S. financing markets and the risk devices developed by private sector stakeholders in the industry. Risk devices developed in the industry are extensively discussed in section 5 of this paper.

A first potential source of market failure is the availability of collateral. From a theory standpoint, this is important as the lender can use collateral as a screening device to distinguish poor- from high-quality borrowers (Stiglitz and Weiss (1986)).

By definition, poor-quality borrowers in the pool of all potential borrowers have a lower likelihood to repay their loans and, hence, carry higher risk from the perspective of the lender. They will be less willing to provide collateral because they are more likely to lose the collateral upon default. If collateral is not available in a financing market, the lenders cannot restrict loans to high-quality borrowers. They will then offer loans at higher average interest rates (i.e., charging higher risk premium) or more tightly ration overall credit to make up for the lower average quality of borrowers in the market.

In film production and distribution markets, while tangible assets are relatively scarce compared to other sectors, the industry is rich in IP and other intangible assets that can serve as collateral in loans. With every new title produced comes a chain of IP rights that not only can incentivize their creation but that can be used as a vehicle to initial finance access.⁵ Moreover, as most IP rights (copyright, trademarks, etc.) are granted for many years to come, larger producers and other right owners can build a catalogue of rights and existing titles that can be used as a collateral in loan deals and guarantee on future receivables (i.e., future royalty income, etc.). This, in turn, can increase the financing available for future film production. Even though intangible assets might not be a perfect substitute for tangible assets from the perspective of the lender (e.g., because intangibles might be harder to liquidate in financial distress (OECD (2015))), they can nevertheless be an important source of collateral and a screening device for lenders in the industry to overcome market failure due to too poor borrower quality. Hence, one of the key question this paper investigates and seeks to address is the following: Are intangible assets, including copyright-protected works, frequently used as a source

⁵In the appendix (additional materials), we briefly discuss how intellectual property assets are typically managed in U.S. film finance.

of collateral in lending deals, in particular among small and medium-sized enterprises (SMEs) in the industry?

A second source of market failure is the general ability of lenders and borrowers in financing markets to build trust and reputation. Longer-term and repeated lending relations with mutual commitments can be a way to prevent market failure in financing markets. This is because borrower misconduct may be sanctioned by lenders in future transactions and lenders can learn on borrower quality and on the nature of the business from previous transactions (Aglietta and Breton (2001)). In the case of the film industry, however, this might sometimes be difficult to achieve. With the exception of major studios, most production entities seeking funds are small, often set up by the producer for the purpose of a single film project. Naturally, this organizational form limits financial risk exposure and, importantly, liability of the producer in the case of project default. At the same time, ad-hoc structures limit the amount of trust and reputation for lending relations in this market.

A third source is incomplete contracts. Reality is often more complicated as parties can borrow from different lenders. Lenders might then be tempted to less vigorously monitor efforts by borrowers than under the single lender scenario because they expect other lenders to help monitor. Moreover, with multiple lenders on a single financing project, loan-specific efforts by the borrowers might not be separable and become more difficult to monitor. So, ultimately, each loan contract may impact the payoff to the other lenders (Bell et al. (1990)). This can give rise to 'externalities' as individual loan contracts might not account for them and hence incomplete contracts provide another potential cause of market failure. At the same time, this also explains why lending and monitoring information in the lending market often has public good character: If there is a mechanism in the

market, or by means of government intervention, to assemble and share this information its social returns will outweigh private costs, this can reduce information asymmetries and eventually lead to better allocation of credit in the market.

In U.S. film financing, there are at least two such mechanisms available. One of them is general credit transparency registers operated on state-levels providing publicly available information to lenders and borrowers on past and current lending activities. The other public source is information on registration and securitization of IP assets (i.e., use of IP assets as collateral in financial deals) that is provided by the U.S. Copyright Office (copyright) and the USPTO (trademarks). Another example is credit rating agencies (Pagano and Jappelli (1993)). These can be seen as important informational infrastructure limiting market failure (Bannier and Hirsch (2010)). Still, incomplete contracts are not uncommon in the U.S. film business, partially because profit participation and accounting practices do not always reveal all costs and profits associated with a given film project (Phillips (2004)). For example, outside investors typically do not have contractual control over pay-off structures and have to rely on the efforts of distributors (e.g., marketing choices, release strategy, or exhibition window) with regards to the exploitation of the film. Still, as we will show in the remainder of the paper by exploration of several new data sources (i.e. Uniform Commercial Code loan registration and copyright registration and recordation), both lenders and borrowers in U.S. film finance make heavy use of general and industry-specific information systems. Arguably, this can increase credit market transparency and help them secure more loans.

3 Principal actors in film finance

In the following sub-sections we will describe the principal actors in U.S. film finance, their unique incentives and how they interact to make film finance and specific types of deals possible. Moreover, we will explain main criteria in financing and lending decisions and generic risk sharing devices in common models of U.S. film finance. The principal actors in film finance are producers, financiers, and distributors.

3.1 Producers

The producers are the individuals or companies (production companies or studios) who seek out a script, assemble a cast and crew to make the film, pitch the film to distributors and financiers, manage the film's finances, and ensure that the film is completed on time and according to the script. Production companies are smaller than studios, often producing one or a few movies at a time in partnership or under commission of a studio. In the U.S., 'major studios' are Disney/Fox, Paramount, Sony, Universal, and Warner Bros, while MGM, LionsGate and DreamWorks are sometimes referred to as 'mini-majors'. The majors are vertically integrated production and distribution companies that consistently command significant shares of the U.S. film market and increasingly distribute titles also on their own streaming platforms such as Disney+, Paramount+ and Peacock (as a collaboration of Warner Discovery and Universal). Pioneering streaming services such as Netflix, Apple, Amazon and Hulu often use similar financing models as major studios.

In the U.S., producers are often set up as legally independent, insolvency remote 'special purpose vehicles' (SPVs) established by the individual producer, pro-

duction company or studio and the financing party solely to produce and exploit a specific film or slate of films. The producer's primary incentive is to complete production on time and according to the script and producer fees are typically included in the total budget of the film. Due to accounting practices that see distributors (including distributing studios) capture most of the upside of movies in 'distribution fees', individual producers and distribution companies often see little of future receivables (e.g., income from royalties). Nevertheless, producers may also have artistic or personal motivations for making a film and interest in keeping creative control over content, for example producers might seek to make a film to promote a cause or to express an artistic style. As "half-completed or failed films are worth nothing" (Law1, Bank1), and, in the case of project default, producers face significant reputational risks from the perspectives of the distributors and financiers if they fail to complete film production.

In general, as much as they are in a position to bargain funding options, producers will prefer financing structures and sources with lower financing cost relative to the total budget (e.g., a comparison of loan interest rates, related insurance fees, cost of mezzanine capital, etc.). At large, the demand for external finance by larger producers and studios will also depend on general interest rates and if 'cheap' money is available vis-à-vis the use of own funds and internal sources.

3.2 Distributors

Distributors are entities that acquire the rights to exhibit a film. Traditionally, these rights are restricted and sold by territory, by language or by distribution channel (such as theatrical releases, streaming, DVD, etc.) and the licensing or transfer of rights may be exclusive or non-exclusive. For movies that see a theatrical release,

the distributor would release the film in cinemas, often buying up show time slots in third-party cinemas and distribution networks. As mentioned in the previous section, many U.S. studios including all majors have vertically integrated production-distribution structures (for example, larger studios can own pay and free television stations, video distribution operations and recently streaming services).

Streaming services are however at the forefront of a new content acquisition strategy in which they tend to acquire all rights to a film in perpetuity. This difference in content acquisition strategy may be understood from at least two perspectives (for an extended discussion, please refer to Section 6). First, whereas traditional distributors are incentivized to sell as many units of a film (DVDs, theatre seats, etc.) as possible, streaming services are motivated by boosting subscription numbers, and the exclusivity of offerings in a streamer's catalog is perhaps its most important value proposition in a competitive market. Second, streaming services often have access to the type of low-cost financing that traditional distributors do not always have. Hence, one of the reasons that streaming services buy out all rights to films is simply because they have larger financial resources and strong Wall Street backing, whereas traditional distributors may not be able to compete. In addition, streaming services like Prime Video Direct and YouTube allow filmmakers to upload their works with the options to sell, rent or be paid by running ads against their content.

The way most financial deals are structured in the U.S. today (see Section 4 below), distributors take on most of the downside risk around the market exploitation and commercial success of a movie (so-called 'performance risk'). At the same time, they tend to take the majority of the film upsides and future receivables, in case the title is a success.

3.3 Financiers

Financiers in the U.S. are predominantly financial institutions that make commercial loans to film producers. Most external financing in film comes from commercial banks with specialized film finance operations and branches, often based in Los Angeles or London. With regard to the U.S., the spatial concentration of debtors and secured parties in the film sector (Figure 16 and Figure 17) appears visually correlated with the different tax incentive schemes implemented over the years in the different U.S. states (Button (2019)). Films may also be financed by non-profits and by high net-worth individuals and other private investors. In addition, tax incentives and government grants play a significant role in many films, including use as a loan collateral, but the role of the government is addressed in Section 7 of this paper.

Producers may also use their personal savings or informal loans and gifts from family and friends to finance movies. In addition many new and increasingly more experienced producers find crowdfunding to be a useful means of funding films. However personal savings, informal loans and gifts and crowdfunding are outside the scope of this paper and will not be discussed further.

Banks are motivated primarily by fees and interest charged for the loans they make; hence, they tend to only lend to films above a certain budget threshold and that have a high probability of paying back, something they ensure by requesting pre-sales agreements, completion guarantees, sales estimates and so on. In addition, banks benefit from the accounts set up to fund the film. With a focus on larger projects and corporate financing, JP Morgan, Bank of America and Wells Fargo are some of the most prominent banks in U.S. film finance. For smaller banks, it is

not uncommon to enter and shortly after exit the film finance market. Most of the loans general banks provide will not allow them to participate in the upsides of a successful movie, but their returns are typically limited to the loan (contractual) obligations. So, importantly, the bank's exposure to risk is often limited to the default of the distributor involved in lending deals, which can happen but rarely occurs.

Non-profits on the other hand are typically motivated to contribute funding and grants because the film addresses a cause they wish to promote. With this type of funding, there are often limited or no expectations of returns and revenue sharing. Finally, although high net-worth individuals may invest in a film with the hope of turning a profit and participating in the upsides of a few successful movie, their investment can also be considered a luxury good consumption based on so-called 'Hollywood dividends', as many such individuals are motivated by the perks of meeting famous movie stars and directors, and VIP access to film industry events and film festivals.

In general, the attractiveness of the film business for investors and commercial banks at a given point in time is driven by expected returns, and the ability to charge loan fees and interest rates vis-à-vis their potential returns and investment in other industries. Several commentators suggested that the movie business is an anti-cyclical one which seems to have proven quite resilient to economic downturns in the overall economy (Law1, Bank1). This factor can also help attract investors and financing to the sector in certain periods.

In the following sub-section, we discuss how the principal actors in film finance come together to make the different types of finance deals that make film-making possible.

4 Types of film finance deals

For any film, financing often comes from multiple deal sources. Some early-stage film productions may secure some financing in the form of: (1) deals with post-production companies, where such post-production companies defer their fees. These deals are essentially equity investments. (2) Sales of the rights to produce merchandise based on a film's intellectual property. (3) Product placement deals - where products are placed in the movie for a negotiated fee. Over the years, the U.S. film financing markets has seen much experimentation and many new forms of finance, not all of them successful. Recently some smaller-budget films have also found crowdfunding to be a useful novel source of financing. Nonetheless, most major film financing deals are in the form of project or single-picture loans, corporate loans, equity investments and film grants.

4.1 Film grants

Nonprofits, foundations, or charities typically provide grants to producers when the film being produced promotes a cause that they support. While grants make up a small share of big-budget film financing, for less experienced or independent creators, they are often the primary or only source of finance.⁶ Grants may also only partly cover the production process, so producers that rely significantly on grants to cover their budget may need to seek out multiple grant deals. In addition, as suggested in interviews, producers may even wish to develop creative content and adjust their initial script and cast to become eligible for a wider range of film grants. The use of private funds and donations, however, can raise other

⁶The appendix includes a brief discussion on the importance of grants for new or less experienced producers (additional materials).

legal challenges for producers and investors.⁷

4.2 Project finance

Project financing is often the predominant share of single film financing for independent productions of medium and big budget film. For such producers, financing can come from a distribution partner (often a major studio) or from a commercial bank. Project financing can take the form of direct finance, negative pickup deals, or gap financing.

Direct financing: In this structure, the distributor agrees to pay a minimum sum for the film to the producer known as the 'minimum guarantee'. This is laid out in the pre-sales contract signed by the producer and the distributor. This sales contract establishes the transfer of rights to (temporarily) exploit certain territories from the producer to the distributor before production. Payments are made during the course of production. In this case, the producer will not need third-party financing. This arrangement may be beneficial for the production since distributors typically have access to cheaper finance than independent producers. Direct financing is a means for distributors to retain more of the value created in films whose performance they feel particularly confident about, while giving an experienced independent producer creative control over the filmmaking process.

Negative pick-up deals: Most commonly, independent movie productions in

⁷When raising private funds in the U.S., it must be noted that federal and state securities laws can apply. They prohibit fraudulent activities of any kind in connection with the offer, purchase, or sale of securities. While it is permissible (as a reward for giving money) to offer donors gifts such as caps, bags, posters, copies of the script and the like, anything analogous to a return on investment can increase litigation risk when provisions of securities laws are violated.

the U.S. are financed by 'negative pickup deals' referred to as such because it requires that a film print (called a 'negative') be produced in full before the distributor is required to acquire it (i.e., pick it up). Experienced independent producers or production companies seeking to finance single movies use the negative pick-up deal, which is usually structured to last for 18 months or less. On the basis of the pre-sales contract which serves as a collateral in the case of default, a 'secured' loan will be obtained from the bank or another lender by the producer. This loan provides them with the immediate cash flow needed to fund the initial production of the film, well before the distributor would be required to pay the 'minimum guarantee' to the producer.

The financing process in its basic form occurs as described below:

- Production of a 'film package'. The film package can include a script or a script outline; list the leading characters, the director, cast, crew and give the budget outline etc. The budget of the film would include pay for all parties that work on the film including the producer.
- Obtaining a completion guarantee. Completion guarantees are issued by specialized insurance agencies called completion guarantors. "In the US, there are five major completion guarantors" notes one interviewee (Law2). Completion guarantees, also known as completion bonds, are contracts where the completion guarantor agrees to complete the film or pay off debtors if the film is not delivered to the distributor on time and according to the script by the producer. See Section 5.5 for more details about completion guarantors.
- The pledge-holder agreement. A laboratory is engaged to process and to hold all physical materials created throughout the course of production. The laboratory will usually sign a 'pledge-holder' agreement with the financier acknowledging the primacy of the financier's claims on the film over that of

the laboratory and other interested parties.

- Pre-sale deal. The producer finds a suitable distributor and obtains a 'pre-sale' deal. The pre-sale deal is an agreement with a distributor where a distributor agrees to pay an indicated minimum amount for a film if the film is delivered on time and according to the script. This minimum amount is called a 'minimum guarantee' and would typically cover the budget of the film as well as the fees for the completion guarantor, the laboratory, and estimated bank fees and interest payments.
- The producer takes pre-sales contracts, the completion bond and the pledgeholder agreement to the bank who would usually lend around 60% (other distributors) to 80% (major studios) of the pre-sale value, depending on the territory involved and the reputation of the distributor (Law2, CG1). The bank will also typically require that the producer devotes 10% of the film's budget to contingencies. This type of loan is also called a senior loan because the lending bank has priority of repayment over other investors.

More complex negative pick-up deals may include multiple distributors in different territories. These more complex deals are more common in non-U.S. productions. In such cases, the documentation and negotiations are much more complex. This becomes even more complex when there are unsold territories or rights.

Gap financing: Project finance may include multiple distributors in different territories as well as build on rights to unsold territories. Rights to unsold territories are usually valued by a reputable international 'sales agent' from whom the producer receives an estimate against which they may borrow, similar to a contractual receivable (often called 'gap financing'). Gap financing provides a source of 'unsecured' loans whose interests are subordinate to that of the secured loans

described above. The types of lenders willing to navigate these more complex and risky deals are even more limited, and their fees and interest rates are typically higher than those charged for financing deals based on pre-sales deals and other secured loans (e.g., based on public sources and tax grants). Here, higher financing costs and prices reflect the additional risk premium banks and other lenders will charge in order to accept the higher commercial risk exposure around the success of the film and the lower priority for the recovery of funds in the case of default. The completion guarantor is also required to ensure delivery to multiple distributors with each of their individual requirements and needs, which means the budgets of the films need to reflect these various delivery items. Finally, there are often multitudes of liens that need to be sorted and perfected under the laws of various jurisdictions, in particular when financing requires the films to be internationally exploited. Again, the legal work - and associated fees - on these sorts of structures is usually multiples of the work and fees in a negative pick-up deal, which again must be added back into the budgets and financing needs of these films.

Bridge loans: In some cases, a producer may need funds to meet commitments before the senior loan deal closes. Bridge loans provide the financing to meet commitments between the start of production and the closing of the senior loan deal. These loans are expensive, costing 2-3% interest per week in addition to high fees. They are usually held for short terms (i.e., a few weeks).

4.3 Corporate finance and equity investment

For studios or production companies that make multiple films (and have built up some reputation and creditworthiness), there are efficiency and pricing gains (in

terms of both fees and interest rates) to be obtained under an 'overall' credit facility when borrowing for more than a single film. These lines of credit take many forms, including most commonly 'borrowing base' facilities, and a 'slate' financing deal structures. However, in general, all major studios and streaming services tend to finance their films under overall, unsecured credit facilities, or public debt and equity offerings.

The borrowing base facility: In a borrowing base facility, an independent producer obtains financing for its movies based on a combination of (1) the known value of signed pre-sale contracts; (2) predictions by major studios (called 'ultimates') of the theatrical performance of movies and other contractual receivables; and (3) for borrowers that meet certain criteria 'credits' for items such as unsold territories are taken into account. This sort of facility is usually led by a syndicate of banks. The syndicate is in turn led by one of the banks for the purpose of this facility. This leading bank, called an 'agent' or 'arranger' is usually an experienced entertainment lending institution and essentially acts as an underwriter.

Even though hard to predict accurately, the ultimates are analyzed to determine the amount of credit that the producer/borrower should receive, by discounted expected earnings back to the date of the analysis to determine the amount of the borrowing base and the loan-to-value relationship. Some borrowing base facilities also factor in the lasting value of a producer/borrower's older films and existing catalogue, so-called 'library credit', and is based on the continued revenue generation of these assets over time.

The borrowing base is a 'revolving' credit facility, meaning that loans are repaid and new money borrowed within a set overall credit limit. These facilities typically exist for a longer term, usually between three and six years. Similar to single film financing, basic film deals (e.g., pre-sales agreements) and other contractual re-

ceivables are usually required as a collateral for borrowing in such a structure.

Slate financing: For a period, slate financing was common practice. It is less so today, as a result of the 2007/2008 financial crisis and the general decline in structured finance. In such a model, traditional studios work with and set up SPVs to fund a percentage of their movies. Under such structures, 10 to 50% of the cost of most future movies of the studio produced during a pre-determined period are financed by external funds. Notably, the SPV is commonly funded through a mix of equity and credit. This provides studios with off-balance sheet financing at a time when revenues are uncertain and the cost of capital is higher. Because they cover the output - or 'slate' - of the studio's output, they are called 'slate financing' deals.⁸ Slate financing is highly structured with the assistance of investment bankers, credit agencies and tax specialists. SPVs used in slate financing are obligated to finance a studio's films that met certain technical criteria, without any other specific knowledge about the films themselves. The future revenue expected from those films are then used to secure the slate financing loans banks would issue. For that reason, this type of financing is also called 'future flow securitization'.

Films that are not financed through slate financing, but rather are financed directly (see above) or based on internal funds are typically those that larger studios are most confident about in terms of their commercial success and hence the studios sought to avoid sharing IP and returns with other investing parties.

Equity investment: Investors may also take equity stakes in the SPVs created by producers or studios to produce a film. Equity investments can come from investment funds that pool the resources of multiple investors or from high net-worth individuals. As in typical equity investments, investors only receive a payout

⁸Examples of recent slate financing deals are shown in Table 2 in the Appendix.

if the film makes a profit after all other costs including distribution, and lending fees and interest payments. Nonetheless, in successful films, the financing costs of equity investment is typically higher from the perspective of the producing studio and when compared to the costs associated with the various forms of lending described above. Still, given that numerous films fail to break even in the U.S. and the difficulty in predicting which films will succeed, most equity investors may expect to see poor returns from their investment. As one film industry executive (SE5) notes *"investors needed to be able to calculate an appropriate credit risk for their investment packages, which they were ill-equipped to do given the uncertainty of performance risk in the film business."* Nonetheless, fiscal rules that provide tax deductions for investments in films continue to encourage equity investors in the U.S.

5 Managing risk in film finance deals

From a finance perspective and as discussed in the framework (section 2), film making is a high-risk venture for several reasons. First, many independent producers are simply not solvent enough to pay back creditors if a film should fail to be produced or fail to be distributed. Second, film success is notoriously hard to predict, hence production and subsequent distribution are no guarantees of a film's financial success. The principal players in this industry have therefore evolved numerous strategies for dealing with risk. In this sub-section, we discuss some of the most prominent risk management devices developed by the private sector.

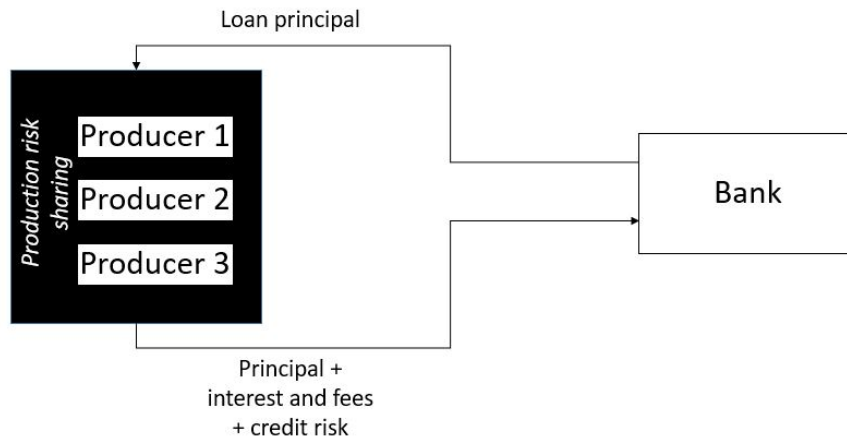


Figure 4: Co-production

5.1 Co-production

From a producer's perspective, one way to manage production risk is to share production with another production company or studio as shown in Figure 4. Co-production allows producers to share the cost of production, and to leverage the technical specialisation of each co-production party such as when one producer specialises in production and the other specialises in post-production. When the co-producing parties are located in different territories, co-producing parties may leverage their local strengths to reach a larger combined audience. Furthermore, in some cases, such co-productions may qualify for public incentives (such as grants, tax rebates/reductions, or inclusion in the domestic production quota) in multiple territories. In this sense, co-production may be understood as a tool to minimise financial, technical and sales risk from a producer perspective. However from the perspective of a financier or distributor, by reducing the risks of a producer, co-production in turn reduces the risk that the producer will default, or that a film will not generate enough sales respectively. At the same time, transaction costs around financial deals are likely to increase with more parties involved.

5.2 Special purpose vehicles

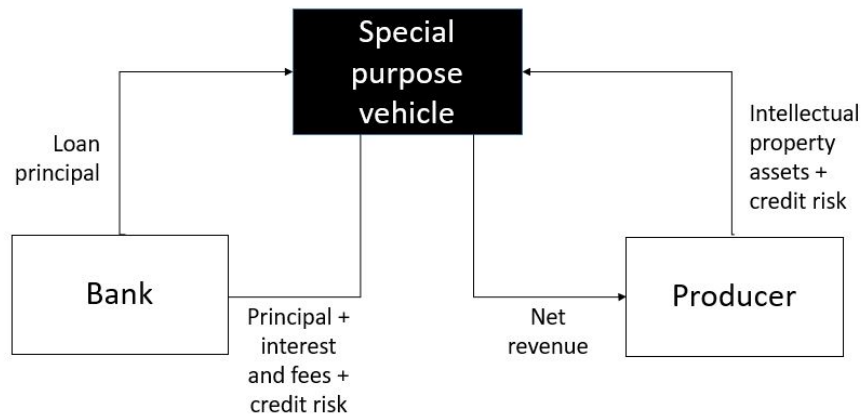


Figure 5: Managing producer risk through special purpose vehicles

SPVs are subsidiaries created as separate legal entities to achieve specific (often temporary) objectives. In the film industry, SPVs are usually used by producers to isolate the debt and assets related to one or more films from the rest of the producer's assets and debts. In this way, SPVs may also help migrate project-specific liabilities from the company's overall balance sheet. In addition, SPVs also allow other investors such as co-production companies and studios to take equity interests directly in the film(s) production. From the perspective of a financier, SPVs isolate out or ring-fence specific assets in which they have a security interest from all other projects and general performance of the producing company. This makes the project and default risk more manageable for them and lowers their overall monitoring cost. A major drawback of the use of SPVs is that in many configurations, SPVs do not allow producers to build up credit histories that may help them access lower cost corporate finance loans in future.



Figure 6: Managing producer and distributor risk through risk swap

5.3 Risk swap

In negative pick-up deals (see above Section, 4.2), distributors avoid paying for uncompleted films, therefore leaving the burden of production risk on the producer. In exchange, distributors provide a minimum guarantee payment to producers. Since this minimum guarantee payment is made regardless of a film’s eventual sales performance, the distributor has effectively accepted the burden of ‘performance’ risk from the producer. Ultimately, the competitive advantage of the distributor over the producer is that she can manage risk through a larger portfolio of film. This risk swap is a fundamental tool in the creation of independent and single-film finance in the U.S.

5.4 Loan syndication

Loan syndication is the pooling together of capital by multiple financial institutions to finance a single loan. From the perspective of a financier, loan syndication is a useful tool for banks and other lenders in managing risk exposure and the ability to participate in larger projects. In syndicated loans, each financier contributes a share of the loan required under a single loan agreement. Each financier’s liability in case of default is thus limited to the value of the share of the loan contributed.

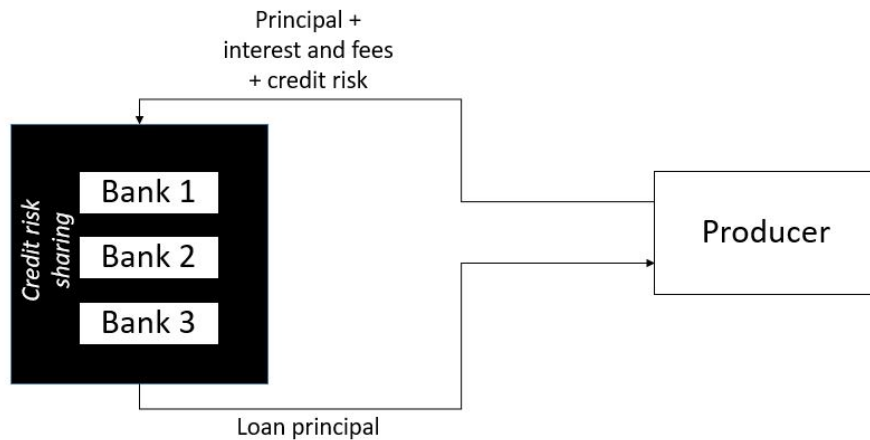


Figure 7: Managing financier risk through syndication

Again, transaction costs can be expected to grow with multiple lenders because they will require more legal work, with the many bilateral contracts (e.g., producer/distributor, producer/bank, producer/completion guarantor, bank/completion guarantor) as well as an omnibus 'inter-party agreement' between all parties involved in the lending deal.

5.5 Indemnification and guarantees

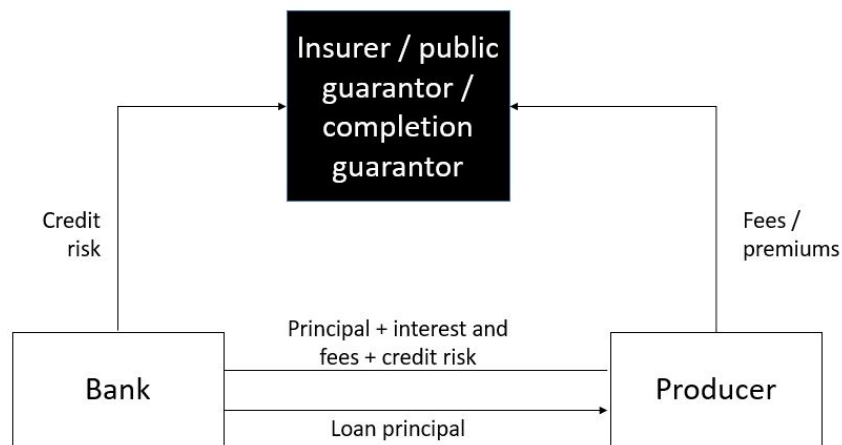


Figure 8: Managing financier risk through indemnification and guarantees

Similar to other industries, the principal actors in U.S. film finance use insurance and third-party contractual guarantees as a key tool to manage their risk. Private and public guarantees greatly reduce or eliminate the risk exposure of financiers and distributors while enabling productions that may have languished otherwise.⁹

To cover 'un-insurable risks' which are unique to the film industry, principal actors look to 'completion guarantees'. A completion guarantee or bond is an agreement between a financier, a producer and a third party - called a 'completion guarantor' or 'completion bond service'. A completion guarantor guarantees that a film will be delivered to the distributor according to agreed upon budget, technical specifications, and at the due date. In this sense, the completion guarantor provides a guarantee to the financier, contracting that if the producer is unable to complete and deliver the film, the guarantor would step in to complete the film, or they would repay the financier. Accordingly, contract clauses in completion bonds typically give the guarantor assigned to the deal wide-reaching control over the production process including management and creative decisions in the case timelines and technical specifications are not met or the project goes over budget.

Completion guarantors are specialized agents in the industry and crucial players without which many film finance deals would not happen. Similar to distributors, they work on a larger portfolio of films and can better diversify risk than other stakeholders in the market. Completion guarantees represent a significant transfer of risk from the financier and distributor to the guarantor and guarantors are thus incentivized to only guarantee films that they confidently expect would be completed and delivered as required. For their effort, one legal expert (Law3)

⁹For example, the U.S. Small Business Administration (SBA) is a noteworthy guarantor of film industry (as in other industries) loans in the U.S. SBA guarantees loans for producers and other lenders that would otherwise have difficulty accessing financing.

notes that *"completion guarantors typically charge around 5-6% of the initial movie budget as fees, sometimes lower"*, about half of which is returned to the producer if the completion guarantee is never actually called in. These completion bond fees are included in the final budget on which a pre-sale agreement is negotiated with a distributor. Fees charged by guarantors are part of the overall financing costs of the film and are typically lower the closer the film is to completion and the less exposed the guarantor is to performance-related risk and losses upon project failure (e.g., a director who falls behind schedule or over-budget, default by a major cast member, etc.).¹⁰

In practice, one former distribution executive (SE5) notes that *"completion guarantees are rarely called in"* and *"a movie for which a completion bond has been called in is usually considered a doomed production, and the guarantor is likely to struggle to collect its full fee when it delivers to the studio a film that it itself had to complete."*

6 Industry trends

In this section, we present quantitative and qualitative trends in U.S. film financing and the on-going digital transformation of the sector. The next subsection explores time trends in the UCC filings and U.S. Copyright Office data, with a focus on intangible use and IP-backed lending markets. As theorized in the framework discussion (section 2), there are various economic reasons why intangible assets as a collateral should be of high importance for lending activities in the film industry, and why stakeholders might be heavy users of the existing information systems helping to secure loans and increase transparency of U.S. lending markets.

¹⁰Many other types of risks around a production are separately insured (e.g., casualty, injury, weather) and bear additional cost, but do not relate to financing structures and decision criteria described in this paper.

6.1 General film financing trends

6.1.1 Debt financing for films has slowly declined

As a first step, we collect UCC filings in our target industry and over time (see the Methodology section in the Appendix for further details on the data and sample characteristics). In Figure 9, we plot the total number of annual industry loans in the observation period between 2007-2022 (black line). This suggests that the movie and video tape production industry heavily relies on debt lending as a source of external finance. Each year, on average, we observe around 1,000 to 1,500 UCC-registered loans based on a total sample (N) of 20,340 original filings in the industry. We provide descriptive evidence that movie debt financing slightly decreases over time, with movie streaming services entering the market and given a change in financing structures towards more equity movie financing. Albeit loans registered spike in years 2013 and 2016, the general trend in (secured) debt financing seems to be decreasing for the most recent years.¹¹ Loans pledged against intangible assets (red line in Figure 9) account for roughly one third in total filings. They show a similar decline in absolute numbers over time as do all other types of collaterals such as chattel, accounts and equipment.

6.1.2 Public lending was significant at the start of the COVID pandemic

In Figure 10, we compare trends in UCC filings in the movie and video tape production industry (SIC code 7812), to overall UCC filings across all U.S. industries. The comparison reveals a correlation between the filing trends, with peaks occurring

¹¹It is worth noting that the COVID-19 pandemic falls within the time-frame of the analysis. We therefore exclude filings that record a public institution as a secured party (e.g., loans distributed under the U.S. 'Small Business Administration' authority during the COVID-19 pandemic). Moreover, we cannot rule out other possible data bias due to the pandemic or because of loans delaying UCC registration, and hence filings made in years 2021 and 2022 warrant cautious interpretation.

in 2013 and 2016. This supports our earlier discussion in Section 3.3 and confirms anecdotal evidence that the movie industry is generally robust to cyclical trends in the overall economy.¹² In addition, the figure also calls attention to the impact of the Covid-19 pandemic crisis on industry-specific UCC filings, with a significant increase in filings in 2020 involving public lenders, such as loans distributed under the U.S. 'Small Business Administration' authority, followed by a sharp drop in registered loans in most recent years.

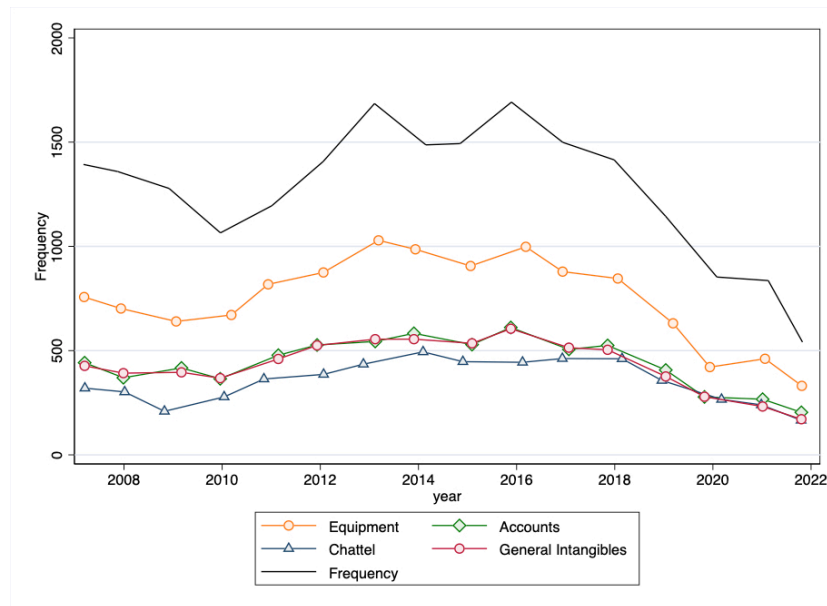


Figure 9: Distribution of UCC Filings and top Collateral

Note: This figure shows the distribution of UCC filings (SIC (1) 7812) across filing statement types = originals. The frequency line shows overall filings. The figure is split in UCC filings with at least one collateral pledged in the respective category. Note that a UCC filing can have multiple collaterals pledged. Note that UCC filings with 'secured party names' from public lenders are excluded in this figure.

¹²These numbers are computed on all filings statement codes (e.g., termination, originals or continuation).

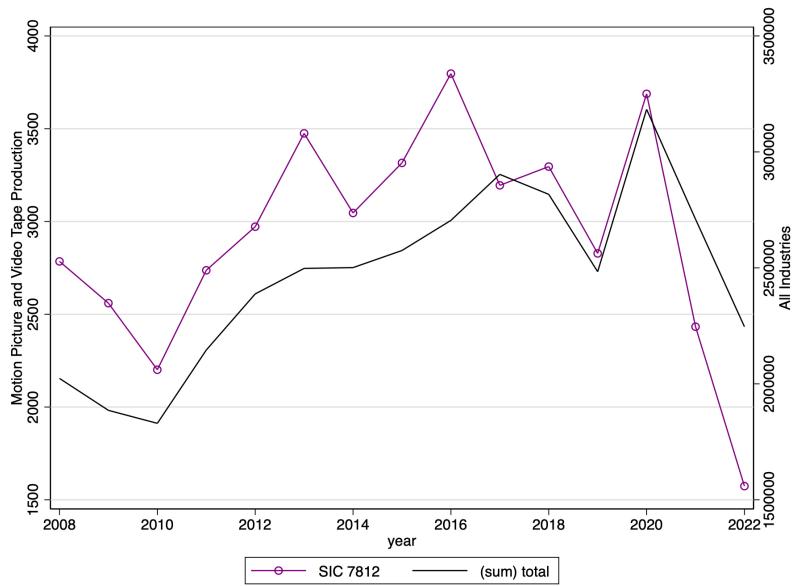


Figure 10: Overall UCC filings

Note: This figure shows the distribution of total UCC filings (across all industries, right y-axis) and UCC filings of SIC industry-code 7812 (left y-axis). Both time-series include UCC filings across all filing statement codes.

6.1.3 Intangibles continue to be widely used as collateral in U.S. film debt finance

It is worth noting that intangible asset are the second most important form of collateral used in the U.S. film industry, right after pledging against equipment. Intangibles include, among others, intellectual property rights as well as customer lists and tax refunds (Gopal and Schnabl, 2022). In Figure 11, we plot the relative share of loans using intangibles as a collateral (among other sources of collateral) compared to total UCC filings in the industry. This figure suggests that the composition of loans secured by intangibles (vs other types of collateral) is increasing for years after 2008, with a relative stable share around 35 percent of total loans afterwards. We separately plot fitted values for years before 2020 to rule out potential noise generated by the Covid-19 crisis. The figure provides evidence that IP and

other intangible assets continue to be important source of collateral in U.S. movie debt finance.

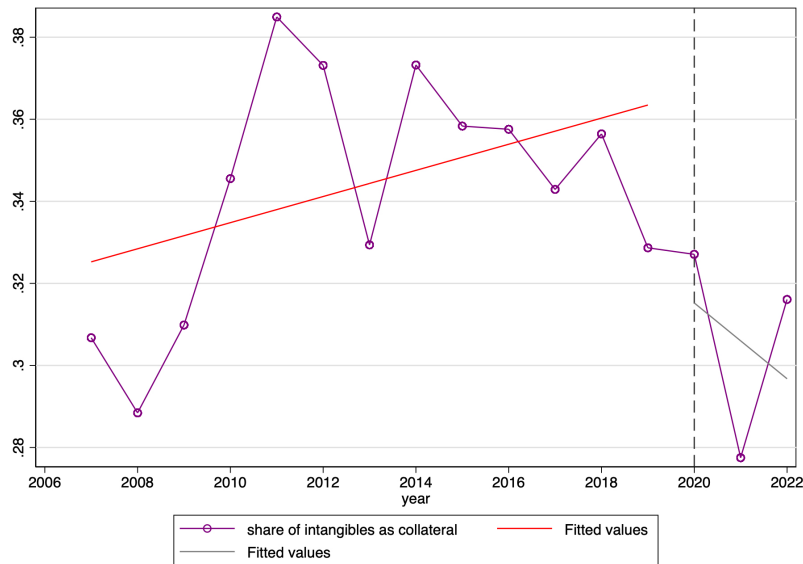


Figure 11: Distribution of UCC Filings with Intangibles as Collateral

Note: This figure shows the distribution of UCC filings (SIC (1) 7812) across filing statement types = originals. The figure plots UCC filings with at least one collateral pledged 'general intangibles' relative to all filings of this SIC-Code classification. Note that one filings can have multiple collaterals pledged. Note that UCC filings with 'secured party names' from public lenders are excluded in this figure. The fitted line is split for pre- and post Covid years (indicated by the vertical y-line.)

6.1.4 SMEs use intangibles-backed loans more extensively than larger producers in the film industry

In the Appendix of the paper, we explore several other dimensions of the UCC loan registration data. For example, in Figure 18, we distinguish debtors by firm size (approximated by the total number of employees). The figure indicates that, at large, the U.S. film sector (and lending activity) is dominated by small and medium sized enterprises (SMEs), and cyclical trends seem more pronounced in this group

of enterprises. In Figure 19, we plot the share of loans backed by intangible assets in total loans, but again account for debtor size. Interestingly, SMEs in the U.S. movie sector had a higher share and more extensively relied on IP-backed lending (vs other sources of collateral), in particular after 2010. Arguably, this is also because larger debtors might own more tangible assets they can use as an alternative collateral. Moreover, larger studios will have access to other alternative sources of finance and might have other funding demands in the first place (e.g. larger credit lines and higher budget volume). In Figure 20, we plot the distribution of approximated syndicated loans and observe an increase in trend for, arguably, larger-volume, syndicated loans from the year 2012 on, with a relatively stable amount around 100 syndicated loans afterward. Moreover, in Figure 21, we describe the average maturity of loans and estimate an average maturity of around 40 to 50 months until loan termination, with a steep increase in average maturity during Covid-19 crisis years. Finally, in Figures 17 and 16, we can describe the geography of registered lenders and borrowers across U.S. states and over the entire observation period. As one might expect, most lenders and borrowers with registered loans are located in either California, Georgia, New York State, Texas, Illinois, Pennsylvania, or Florida. Table 8 lists the top 30 lender and borrowing parties as reported in the overall UCC data for the U.S. film industry.

6.1.5 More films are being registered each year

We also use alternative data from USCO on the registration and recordation of works protected under U.S. copyright laws. For motion pictures alone, the USCO data contains more than 1.1 million registered titles and another 4,080 of pre-

registered film.¹³ Figure 12 plots the time trend in the total annual number of registered and pre-registered movies. It shows a constant increase in the supply of new (registered) productions over the last 40 years, in particular since the turn of the century.

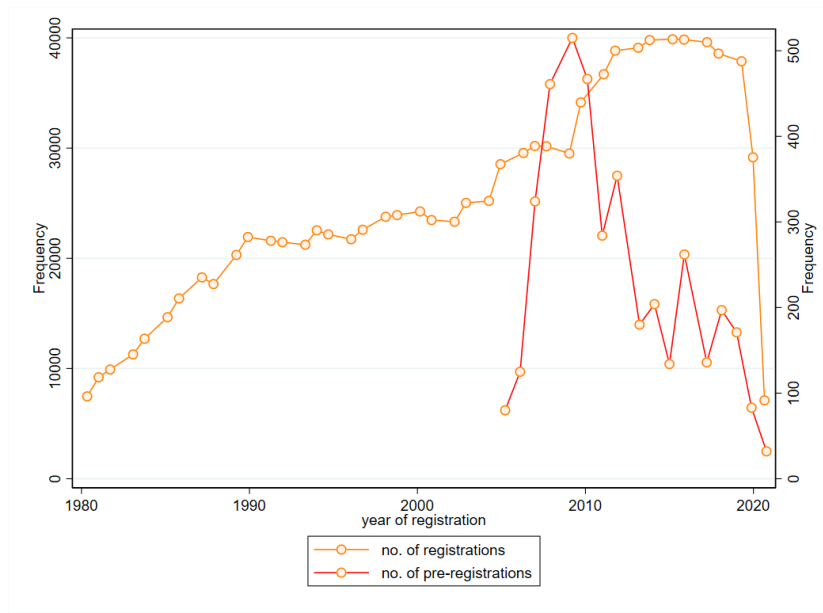


Figure 12: Annual number of total registrations and pre-registrations of motion pictures at the U.S. Copyright Office

Note: This figure shows the annual number of total registrations (left y-axis) and pre-registrations (right y-axis) of copyrighted works classified as motion pictures at the U.S. Copyright Office. Please note that the scaling of the y-axes differs.

Copyright recordings in the same period account for more than 200 million recorded works in the overall data, with recordings pertaining to roughly 495,000 titles relating to (pre-)registered movies alone. For more than half of these records, we can observe the type of recordation (information otherwise not reported in the data) and we can match to the underlying registered motion picture. As explained above, there are strong incentives to record 'security interest' and collateral use of

¹³In this study, the data sample is restricted to registrations of motion pictures and filmstrip materials only, and does not include (pre-)registration of screenplays at USCO.

copyrighted works at the USCO. Security interest recordations account for more than 80 percent of total recordations around registered film titles and are thus the main type of recordation in our data. Figure 13 shows the total number of recorded works by registration year since the 1980s, for works previously registered at the USCO. Average numbers range between 5,000 to 20,000 recorded works per year. Furthermore, the figure distinguishes recorded works where we can observe security interest recordations vis-a-vis all recordations in our matched data (i.e., including recorded works where information on the type of recordation is missing, but there is a registered title match). Notably, individual recordations may contain from one or up to several hundreds of registered works each. Accordingly, we also plot the average number of works per recordation and year of recordation, and time trends on the level of recordations in Figures 22 and 24 of the Appendix. This shows a similar trend in recordations over time: After a several years of growth in recordations, average numbers have declined in more recent years, in line with the general trend observed in the UCC data (Figure 9). Figure 22 suggests a weak decline in the average number of registered motion pictures per recordation (mean). However, this decline is also due to a few recordations that have exceptionally high numbers of works behind them (median).

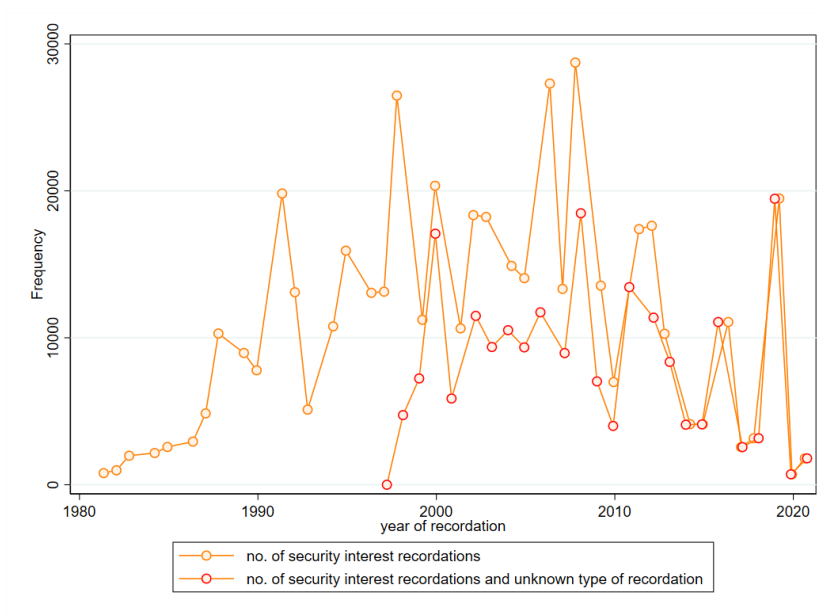


Figure 13: Annual number of total 'security interest' recordings of registered motion pictures by year of recordation, work level

Note: This figure shows the annual number of total recorded works by year of recordation and classified as 'security interest' recordings (or with unknown type of recordation). Recordations in the matched sample relate to registered motion pictures only.

6.1.6 Existing film titles may be increasingly less traded or used as collateral in future deals

We can also look at the year of first registration of the underlying movie title(s) recorded in the security interest document. This indicates the relative use of copyrighted assets from different cohorts and, arguably, their potential value for collateral use and recordation purposes. Figure 14 plots the total number of recorded works by registration year since the 1980s. Registered works from the 1990s and older assets seem to be more frequently recorded and used as a collateral in loans, compared to movies registered earlier on and after. Still, for more recently registered titles (e.g., as of 2010), lower recordation rates might be an artefact of the data sampling as the window of observation after first registration is several years

shorter. In turn, this reduces overall potential of registered works to be recorded and used as security interest in lending deals. Again, we distinguish recordations where the type of recordation can be observed (security interest) vis-a-vis all recordations including those with unknown recordation type. As Figure 23 in the Appendix further illustrates, the average number of recordations an individual work receives stays constant over the entire observation period, ranging between 4 to 6 recordations per registration.

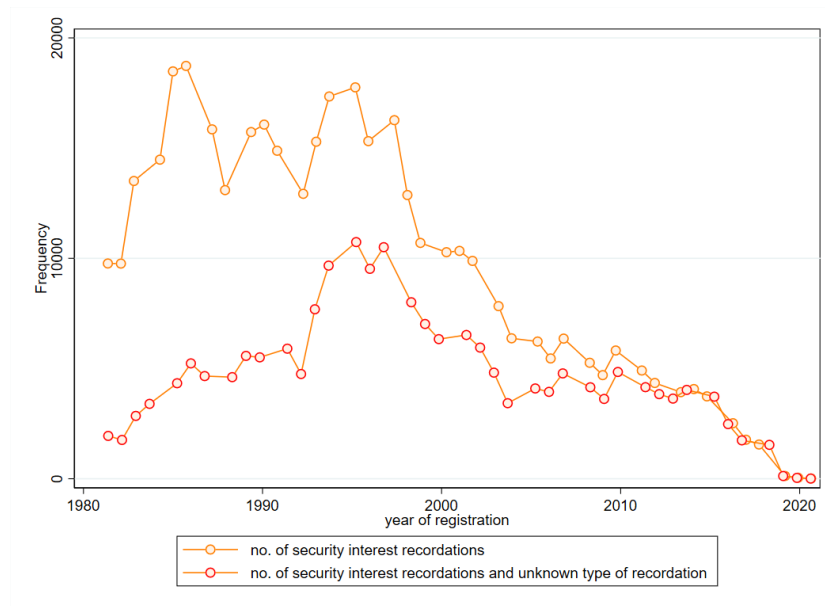


Figure 14: Annual number of total 'security interest' recordations of registered motion pictures by year of registration, work level

Note: This figure shows the annual number of total recorded works by year of registration and classified as 'security interest' recordations (or with unknown type of recordation). Recordations in the matched sample relate to registered motion pictures only.

6.1.7 Older films are more likely to be used in film-financed deals

Finally, we can descriptively analyse the time lag between first registration and first recordation of a registered movie title as a security interest. Figure 25 in the Ap-

pendix shows that, on average, it takes between 5 to 15 years for a movie title to be referenced in a new recordation. Tentatively, our results indicate that recordations issued before 2005 and after 2015 typically refer to more recently registered motion pictures, while recordations issued between 2005 and 2015 tend to build on slightly older titles in the catalogue of registered film. Similar trends in mean and median values further show that general trends are not subject to outlier recordations.

6.2 Digital transformation of the film sector

The digital revolution is transforming the entire sector and particularly film financing practices in multiple ways. These include through increasing competition in the sector, better consumption data, changing consumer preferences, and potential market saturation. Still, it should be noted that the sector with all its stakeholders has a long-standing history of accommodating and adapting to technological changes (for example, the transitioning from cinematic distribution to home entertainment and DVD in the 1990s, etc.).

6.2.1 Competition in the film industry is growing

First, increased competition resulting from the entry of streaming services is likely to lead to increased uncertainty around the predictability of future returns of movie titles. One plausible economic implication of this is that banks and insurers will now charge higher loan fees to mitigate the risks resulting from of higher uncertainty. At a minimum, this might have already reduced the number and value of lending deals on unsold territories and catalogue/library loans. Still, as one senior bank ex-

ecutive argued (Bank3), *"competition over fees in the lending industry is keeping fees in check and, effectively, there is limited scope to adjust fees for banks even if they wish to do it. What is more important is changes individual banks pursue to become more or less risk averse with their lending practices and fee structures."* In general, higher uncertainty in future distribution structures suggests a growing importance of intermediaries such as completion guarantors, other industry insurers, and sales agents that, offer their sales estimates over unsold territories in the film financing environment.

6.2.2 Independent productions are more difficult to make

In the same vein, tighter competition among distributors has led to higher prices for content and better financial deals for content producers (e.g., higher pre-sales values). Exclusive content distribution has been shown to be a means of escaping heavy competition in downstream markets (Rochet and Tirole, 2003), but, at the same time, drives up piracy rate and online consumption in unauthorized channels (Cuntz and Bergquist, 2022). At large, it seems streaming entry brought 'fresh' money and additional investment to audiovisual markets as streaming services now provide a valid 'second option' for independent film producers. Temporarily, this has helped producers to improve their bargaining position over more traditional outlets and independent film distributors in the market. Still, it should be noted, as one expert suggested (CG1), *"back in the old days, the overall amount of funds you as a producer would be able to collect from the various pre-sales deals with multiple distributors around the world would still be higher than the amount of money you would get from a one-shot full buy-out of rights with a global streamer. Moreover, at the time, selling foreign territories rights first was a way for independent producers*

to keep control over their U.S. rights. So, today, full buy-out of rights is effectively lowering the average budget available per independent film title.” Along the same lines, another expert from a streaming service (SE5) argued that *“with more independent producers opting out to streamers and streamer audiences growing globally, it is also the case that income from non-U.S. cinematic distribution is gradually on the decline, making it less likely for independent distributors to raise sufficient money to purchase content from producers and outbid streamers in the longer-term.”* This tighter downstream competition has real world economic implications. As one expert pointed out (CG1), *“with heavier competition in downstream markets, by now, more than half of the independent producers have been pushed out of the market and stopped operating in the U.S.”*

6.2.3 The potential of analytics has yet to be fully realized

On the other hand, although better availability of exclusive consumption data might restrain the effects of the 'poorer predictability' hypothesis we have proposed, anecdotal evidence from interviews suggest that the power of data should not be over-estimated in the audiovisual sector. As one streaming service executive (SE5) argued *“there is very rich data in our company, but that’s limited to consumption on our platform. There are many alternative uses of that data beyond just using it for the prediction of title success. Often data uses [and investment in data analytics] elsewhere are much more valuable to us and predictive power of historic data is not helping when you want to launch really new content. What we think is more important is the overall strategy of the platform and the audience you have in mind for that, think of age, gender, and other viewer characteristics, and whether or not new content fits our strategic direction for the catalogue.”*

6.2.4 Exclusive deals and exploitation have replaced licensing and exploitation as key IP management strategies

The distribution of new types of content is another notable change in the digital age. These changes include greater TV series and short video consumption; a renewed focus on working with star talent who themselves offer high brand value; as well as more content being produced for global audiences. As such, content are increasingly selected for production on the basis of whether they have great potential for maximum exploitation - e.g. shipping to other territories as well as merchandising. As one streaming service expert explained (SE5), *"One main concern for us is longer-term availability of content in our catalogues. So, this has killed title licensing for us and lately we focus on full buy-outs only to have enduring control."* With more global distribution on the horizon, local content might also be exposed to greater competition from global content on streaming services, leading to heavier concentration in content consumption. Beyond the impact of digitization, it is also clear that content with a proven audience such as sequels or adaptations will be easier to finance than exploring entirely original content and stories. This trend may manifest in the ease of finding distribution partners for derivative works, and in the fees charged by banks and other agents around these projects.

6.2.5 Streaming service growth may have peaked

Finally, some interviewees also noted a potential saturation of streaming markets and a possible end to the growing dominance of global streaming services. As one legal expert (Law2) explained *"for major studios, there might soon be a comeback*

of slate finance and related off-balance film financing, as streaming services need to show their economic viability now more than tomorrow [Wall Street investors are less willing to bet on future returns of services], as their own funds to fund exclusive content might dry up, and general cost of capital are again increasing.” Another interviewee from a media consulting company (Econ1) highlighted that with the most recent pressures in the streaming market, *“big streamers might want to reconsider their dominant subscription model. Rather than charging a single fee for all, they could start charging consumers differently, depending on their effective consumption of content on the platform.”* Arguably, services such as Apple and Amazon that bundle their products and services on platforms could have a competitive advantage over streaming services catering only audiovisual content to users (Peitz (2008); Crawford (2015)).

7 Policy trends and options

In light of the importance, challenges and rapid advances occurring in the U.S. film industry, in this section, we discuss policy trends and options which may improve the overall environment in movie financing in the U.S. and beyond.

Although U.S. film finance is predominantly built on private sector finance, public policy plays an active role to play in the financing of film productions. Many U.S. states, for example, provide for tax incentives to shoot and produce in a given location, which can account for up to 15-25 % of the total production budget. Previous economic research suggests that the evidence is mixed (Button (2019)). While location incentives helped to increase TV series filming in a given U.S. state, they had no meaningful effect on ‘footlose’ feature films and local industry employment accord-

ing to the research. Yet, it is important to note that in film financing, some lending can be made against public tax incentives and grants (see Section 4 on types of deals), something the former study did not consider explicitly. In other instances, the federal government acts as a guarantor in general loan schemes such as the long-standing Small Business Administration (SBA) Loans¹⁴ and the more recent Paycheck Protection Program (PPP) Covid-19 recovery forgivable loans package¹⁵ launched at the outset of the 2020 pandemic crisis and in times when credit conditions have been tightening. Moreover, in the past, U.S. tax regimes also offered incentives to private investors which helped to make new film production a more attractive investment option for wealthy individual investors (Law2). Such tax incentives seem to also have effect across borders. For example, although apparently unintentional, favorable tax regimes in the 1980s and 1990s helped attract wealthy private investors from Europe to the U.S. audiovisual sector who then funded many domestic U.S. productions (SE5).¹⁶

Beyond existing public policies in the U.S., in the following sections, we will discuss how policymakers might support local film finance ecosystems by improving: information access and quality; financial management education for young pro-

¹⁴The SBA broadly classifies small businesses as any firm with 500 or fewer employees. Based on that criteria, most firms in the movie industry will hence be eligible for this government-guaranteed loans program. The SBA collaborates with approximately 5,000 commercial banks and credit unions, some 250 Community Development Corporations, over 170 non-profit financial intermediaries and Community Development Financial Institutions, and approximately 300 small business investment companies. The SBA's Disaster Loan Scheme in particular helps business obtain deferrals for existing loans, so borrowing companies can stay solvent. For details, see <https://www.oecd-ilibrary.org/sites/8ae4e97d-enback-endnotea50z2/index.html?itemId=/content/component/8ae4e97d-enback-endnotea50z2>

¹⁵Under the PPP, the principal on loans used for working capital for eight weeks was forgiven if the business maintained pre-crisis employment levels.

¹⁶Furthermore, on a more general level, domestic taxes and international accounting rules can treat own funds use differently from external funds (debt) in new content production, analogue to the often unfavorable treatment of R&D investment and debt funding in technical innovation (Hall and Lerner (2010)). In turn, this might increase or lower the general profile and attractiveness of one or the other option to content producing companies.

ducers; distribution deal-making; and markets for IP.

7.1 Improving information access and quality

One promising route for action is a general upgrade of the informational environment around financial deals. Information is key because it allows potential lenders to assess the creditworthiness of borrowers and their experience via information on previous deals and use of IP and other types of assets as a collateral. Official registers of IP and IP recordation as well as credit transparency registers such as UCC filings in the U.S. are important ways to increase financial market transparency around past and present deals. First, such registers provide for more fine grained information on the ownership and use of IP assets as compared to the limited financial information available on balance sheet. Second, certain accounting practices muddy the information available on balance sheets on tangible and intangible assets, as pointed out by several experts (Law3, Bank2). Third, in many cases, stakeholders have an incentive to separate and outplace some of the project and credit risk to outside entities, which then are not even reported on the balance sheet of the original company. At least in the past two decades, this has been common practice in the U.S. movie industry as many financial deals saw new Special Purpose Vehicles (SPVs) created around them, ultimately limiting risk exposure of parent studios and distributors (see previous section on types of deals).

Ideally, (online) registration should be easy to do and at no or low cost for all stakeholders. In principle, a one-stop register that brings together all information on IP assets and other types of collateral use as well as the information on loans and other sources of movie financing is helpful. However, beyond mere availability of information, the quality of information access and the ease of (online) search

in registers also matters. In this sense, there are two main quality issues limiting the utility of registers. First, even in the U.S. case where registration and recordation are already norms, much of the IP use information is very difficult, sometimes impossible to systematically assemble from existing IP register and recordation registers. This presents an opportunity to further improve access to information and lower search costs. In particular, features that enable interested parties to track the use of multiple specific IP assets as collateral over subsequent loans as well as the identification of all historical financial deals of a given borrower would strengthen existing registers. Second, due to varying legal regimes, the quality of information seems to vary significantly from one jurisdiction to the next.¹⁷

Information on company ratings provide another valuable source of information to assess the creditworthiness of production companies and studios for corporate finance and targeted equity investment. This rating information is more readily available than credit and IP register information. As one financial expert described to us, the main criteria to select one company over the other as a client in corporate finance were the following (Bank3): *"well, first of all, we look at the studio's management team quality and the industry experience they can bring to the table. So, we actually partner with those who have creative potential to produce new content but also have shown they understand and know how to do business, for example the ability of a studio to control and manage overhead costs. Hence, we are naturally also interested in the general business model of the studio. So, for example, we ask who are the studio's distribution partners and how well integrated are they in distribution networks. At last, we also care for the general financial backbone of the company,*

¹⁷As noted in a WIPO survey in 2009, in the countries where IP collateralization has been specifically accepted in law, the relevant issues are mainly addressed by a mixture of laws, including laws on security interests, IP laws and other relevant laws, such as bankruptcy laws or the laws on civil procedure. The fragmentation among laws results in lots of discrepancies and uncertainties to the transactions and related information.

things like ownership structure and general capitalization are important criteria. So, say the company is already backed by some wealthy individuals etc. that could serve us as 'lenders of last resort' in the case of default, this will also matter." At large, better access to company ratings and instant performance information could be another policy goal worth pursuing to encourage more and larger financial deals in the industry.

7.2 Financial management education for young producers

Another possible route for policy action is improving the financial management education for young producers.¹⁸

In film schools, curricula do not necessarily include sufficient training on financial accounting and the financing of film production and distribution. Rather, curricula often put an emphasis on creativity and artistic know-how around film making. As one young producer (Prod2) explained to us *"I was often left with learning the whole terminology and the nitty-gritty details of legal contracts myself and trying to understand the structure of financial deals that were offered to me. What felt really empowering was the information exchange and help of my own networks of peer [young] producers and learning from other more experienced colleagues facing the same challenges. Still, some national collective management organizations and film foundations were offering courses and they were actually organizing events that discussed financing and practical issues more broadly. In any case, networking was key*

¹⁸For such a policy to effectively work, it is of course a requirement that young producers are willing to invest time, upgrade their skills and, to some degree, move away from their core creative tasks. This is not necessarily the case and cannot always be presumed. As one young producer explained to us, *"in my ideal world, I would want other people to work on legal and contractual issues, so I can center my attention on the work I love most, being creative and making films. If that means I would need to give up working as an independent and I would be hired by a studio on a regular basis, I'd definitely prefer that."*

to my personal success and for getting my first deals around productions done. Because financing conditions and windows of opportunity kept changing throughout the pre- and post-production phases, it was also helpful to stay flexible and keep adjusting my ambitions and management throughout the entire project to accommodate last minute changes and ultimately make things happen.” Better financial management education might therefore make financing less of a trial and error process for young creators and also empower experienced producers. Such education should include training aimed at improving project planning capabilities and general financial literacy. As one financial expert (Econ1) mentioned *“it is often the case that producers underestimate the potential future upsides of their successful film titles and they sometimes fail to do the accounting well laid out in deals. You know, constant small revenues coming in the future can build up to a quite substantial amount of money. Here, their financial literacy could be improved, so they will be in a better position to judge financial deals and legal contracts offered to them.”*

7.3 Distribution deal-making

Distribution deal-making is another point in the film-making value chain where policy intervention might yield significant results. First, film festivals which are numerous and highly developed in the U.S. provide opportunities for producers to pitch an initial ‘package’ or basic idea for a film (script, line-up of actors etc.) to potential distributors. Other countries can learn from this and move to support local film festivals and attract international ones. On the other hand, banks seem to greatly prefer certain distributors (typically major studios, larger creditworthy companies, etc.) to others. A policy that encourages banks to engage more favourably with smaller or lesser-known distributors, such as one that guarantees the creditwor-

thiness of these distributors, are worthwhile considerations where the objective is to diversify the distributor pool for producers.

7.4 Supporting markets for IP

Finally, there is the notion in much of the academic literature that targeted policies should help boost the efficiency of markets for the transfer and sales of IP assets (Dinnetz and Mireles (2022)). They argue that a more fluid and transparent market would help to trade these assets in case of credit default or company bankruptcy. While in theory, this argument is quite convincing, experts and industry practitioners we interviewed only rarely mention this as a potential policy issue and fix, at least in the U.S. Still, reference was made to U.S. bankruptcy laws as an important framework condition in that context. One expert (Law2) suggested that *“U.S. law treats IP assets differently from other assets when it comes to bankruptcy, something not uncommon in the industry”* and explained in greater detail *“[bankruptcy] laws actually prevent the bankruptcy administrator or anyone else from taking the rights of parties to their IP away from them. Under certain conditions, they guarantee the right to continue using the asset. Clearly, the way these laws are set up assures that exploitation continues to pay the creditors lined up around the default case, even when rights are sold after bankruptcy.”* Importantly, we hence argue that, under current U.S. bankruptcy rules, overall loan risk exposure is lower around financial deals as rules limit the potential losses to banks and other investors in default cases. This compares to a situation and national laws with no such requirement in place where, IP assets are frozen upon default, their exploitation is put to halt, and contracted future revenue streams will not come in anymore to recover financing costs. This also means that potential economic risk exposure around deals and legal/contractual complexity increases in international bankruptcy cases (e.g., international

co-productions, etc.), where rules from different territories may be applicable.

8 Conclusion

In summary, film finance can be a risky undertaking and complex affair involving a variety of actors with differing incentive and reward structures. As we outline in the conceptual framework, the U.S. film industry is an iconic case to study risk mitigation mechanisms developed by the private sector actors to prevent financial market failure and limit access to funds. Nonetheless, films continue to get made, despite ever-growing film budgets and the digital transformation of the sector, and properly managed intellectual property rights remain the foundation of financial deals that make those films possible. Private stakeholders in the U.S. have found a variety of important mechanisms to ring-fence risk in financial deals, including indemnification and guarantees, loan syndication, risk swaps, co-production as well as the use of special purpose vehicles.

Exploratory data analysis of credit transparency register filings and U.S. Copyright Office recordations corroborates the idea developed in the theoretical framework that many financial deals are backed by intangible assets including IP. In particular, we find that around one third of the lending deals in the industry are backed by intangible assets. In this sense, and even though financial experimentation continues in the market, the U.S. film industry is perhaps the archetype of an industrial sector powered by IP-backed loans and offers lessons to policy-makers interested in understanding or promoting such deals.

Finally, although this industry is primarily private-sector driven, public policy

has role in its development and will continue to be a major behind-the-scenes driver of film industry success in the U.S. Based on the assessment of current industry trends, the most promising policy options include (1) improving information access and quality in the U.S. film financing market, (2) providing financial management education to young producers, (3) improving the pool of distributors available for producers, and (4) supporting markets for IP.

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Methodology

Analyses and policy options presented in this paper are based on qualitative and quantitative investigations carried out between March and December 2022. In this section, we provide insight into the underlying methodologies.

Qualitative investigation of U.S. film finance

The qualitative research strategy for this paper relied on three methods of primary data collection namely: expert interviews, expert memoranda, and a panel discussion with experts and other interested participants.

Seventeen industry expert interviews were conducted between March and October 2022 with each interview lasting for one hour on average. Following some of these interviews, one memorandum was commissioned by WIPO, and two others were offered to the authors by the interviewees. Interviewees, described in table 1, were selected to represent the different key actors in U.S. film finance including producers/studios, financiers, completion guarantors and legal experts with experience setting up movie finance contracts. We used a semi-structured interview format, encouraging the interviewees to provide more information where it was appropriate. As our understanding of the field grew, our questionnaires changed to probe deeper. In addition to independently identifying interviewees, we also snowballed to other interviewees based on the recommendation of preceding interviewees.

All interviews were conducted by the authors with most interviews having at least three authors present. All authors took notes independently. The authors then analyzed the data using a grounded theory approach. In this approach themes were allowed to emerge inductively from the authors reading of the data. The initial analyses and summarizing were done separately by the authors who then compared notes to reach a common understanding of the data or seek clarification from other sources where necessary.

This document is also informed by a three-hour discussion panel organized following the series of interviews. In this panel, five interviewees were invited to present their perspectives on film finance to all other interviewees, the authors and over 350 members of the public. This discussion panel provided a forum for different perspectives on film finance to be elaborated, debated and clarified. All authors attended and facilitated the discussion panel which was recorded in its entirety for further analyses.

Quantitative investigation of U.S. film finance

The quantitative analyses in this paper is primarily based on two sources: third-party proprietary data on harmonized Uniform Commercial Code (UCC) filings across all 50 U.S. states (2007-2022), and historic public data on copyright protected works recently released by the U.S. Copyright Office (1979-2021).

The Uniform Commercial Code is a set of rules that states use to align their laws regarding commercial transactions. Specifically, a UCC filing is a legal statement that indicates a creditor's interest in assets. The filing includes a list of the assets used to back the business loan. UCC filings essentially determine priority order of creditors in the case of bankruptcy. The priority filing is also essential when the debtor pledges part of the collateral to multiple lenders.

Lenders file and use UCC filings to publicly claim the rights to business assets until the borrower pays off the debt. As noted by Gopal and Schnabl (2022), without the UCC filing, lenders are viewed as unsecured creditors, which indicates lower recovery likelihood in the case of borrower default. In addition, the cost of filing is minimal, ranging from 8\$ to 100\$ (depending of U.S. state).

The final data set covers the 'Motion Picture and Video Tape Production' industry (SIC code 7812¹⁹ (Motion Picture and Video Tape Production)). The data covers the time-frame 2007-2022, for filings across all states in the U.S. Furthermore, the present data classifies the collateral into 40 categories (and asset types). In the case of multiple collaterals, this information is included our data. As discussed, our main focus of analysis is on collaterals pledged as 'General Intangibles', that include, among others, customer lists or tax refunds, but as well intellectual property rights, i.e., copyrights or patents (Gopal and Schnabl, 2022)).

The second main source is data on the registration and recordation of motion pictures at the U.S. Copyright Office (USCO). This data covers more than 40 years of historic copyright registration and recordation filings, including more than 20 million official records published from January 1, 1978, to July 8, 2021. The data is public and can accessed via this link. Previous economic research using this new source has dealt with the role of women creators as represented in the U.S. copyright system (United States Copyright Office, 2022). Recordation data has been used for statistical purposes in pioneering work by Brauneis (2014).

For motion pictures alone, the USCO data contains more than 1.1 million registered titles and another 11,800 of pre-registered film. However, there are several other types of works that can be registered at the USCO including musical record-

¹⁹Standard Industrial Classification (SIC) codes are 4- to 8-digit numerical codes assigned by the U.S. government that categorize the industries to which companies belong, while also organizing industries by their business activities.

ings, visual artworks or books. Moreover, the data not only covers registration but recordation events. Recordations at the USCO follow different purpose, most prominently in the context of this study, the perfection of a loan-related security interest. Still, there are other types of recordation, for example, the transfer and assignment of existing rights between right owners and other parties.

Appendix



UCC FINANCING STATEMENT

FOLLOW INSTRUCTIONS

A. NAME & PHONE OF CONTACT AT FILER (optional)
B. E-MAIL CONTACT AT FILER (optional)
C. SEND ACKNOWLEDGMENT TO: (Name and Address)
<div style="border: 1px solid black; width: 100%; height: 100%; margin: 0;"></div>

THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY

1. DEBTOR'S NAME: Provide only one Debtor name (1a or 1b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 1b, leave all of item 1 blank, check here and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

1a. ORGANIZATION'S NAME				
OR				
1b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX	
1c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY

2. DEBTOR'S NAME: Provide only one Debtor name (2a or 2b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 2b, leave all of item 2 blank, check here and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

2a. ORGANIZATION'S NAME				
OR				
2b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX	
2c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY

3. SECURED PARTY'S NAME (or NAME of ASSIGNEE of ASSIGNOR SECURED PARTY): Provide only one Secured Party name (3a or 3b)

3a. ORGANIZATION'S NAME				
OR				
3b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)	SUFFIX	
3c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY

4. COLLATERAL: This financing statement covers the following collateral:

5. Check only if applicable and check only one box: Collateral is held in a Trust (see UCC1Ad, item 17 and Instructions) being administered by a Decedent's Personal Representative

6a. Check only if applicable and check only one box: Public-Finance Transaction Manufactured-Home Transaction A Debtor is a Transmitting Utility

6b. Check only if applicable and check only one box: Agricultural Lien Non-UCC Filing

7. ALTERNATIVE DESIGNATION (if applicable): Lessee/Lessor Consignee/Consignor Seller/Buyer Bailee/Bailor Licensee/Licensor

8. OPTIONAL FILER REFERENCE DATA:

Figure 15: UCC-1 filing example

Note: Example of UCC-1 filing. Source: The Secretary of State of Texas. Accessed on the 10 March 2023 through this link.

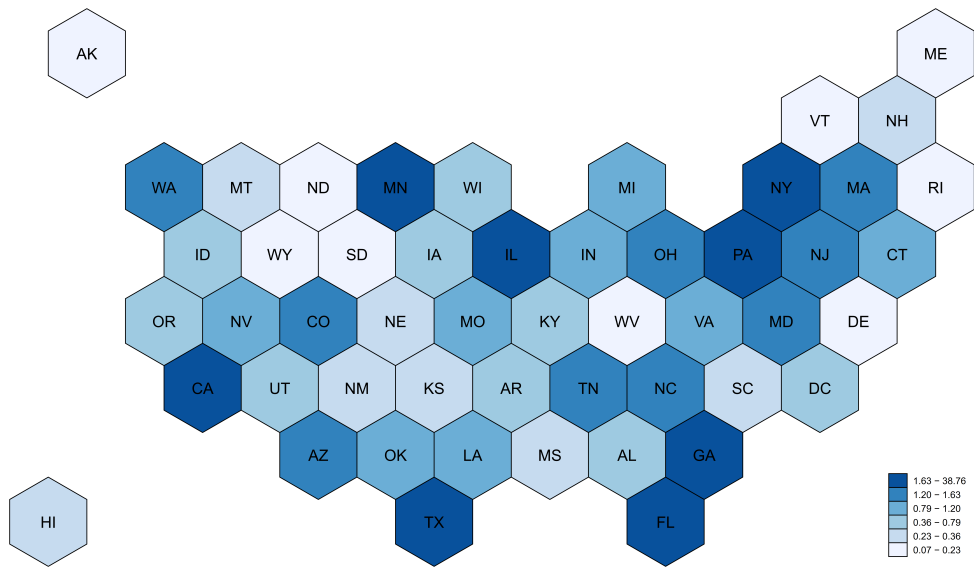


Figure 16: Geographic distribution of Debtors in U.S.

Note: This figure shows the geographic distribution of debtors (SIC (1) 7812) in U.S. in the period 2007-2022. The geographic units are divided into equal-sized bins (six quantiles).

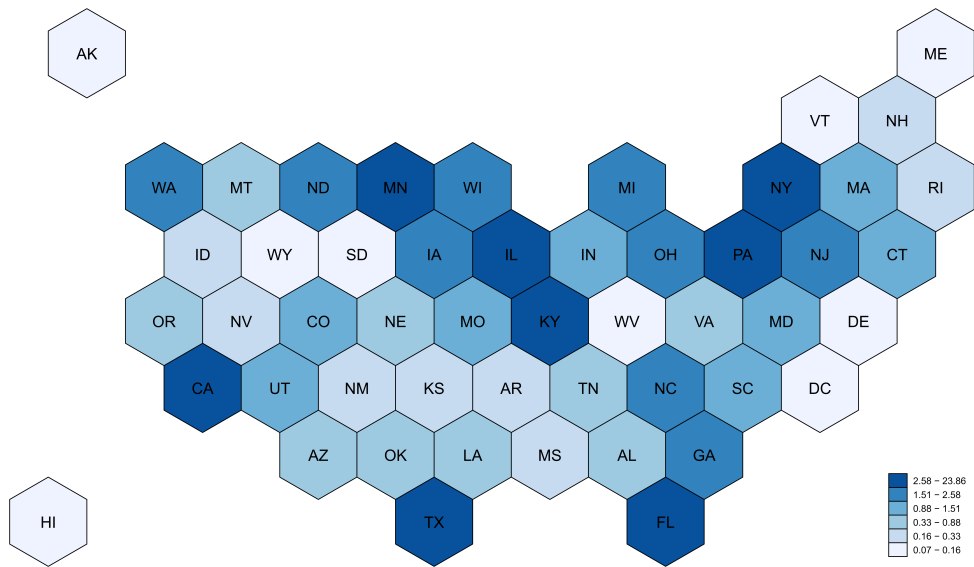


Figure 17: Geographic distribution of Secured Parties in U.S.

Note: This figure shows the geographic distribution of secured parties (SIC (1) 7812) in U.S. in the period 2007-2022. The geographic units are divided into equal-sized bins (six quantiles). U.S. Small Business Administration secured party is excluded from the sample.

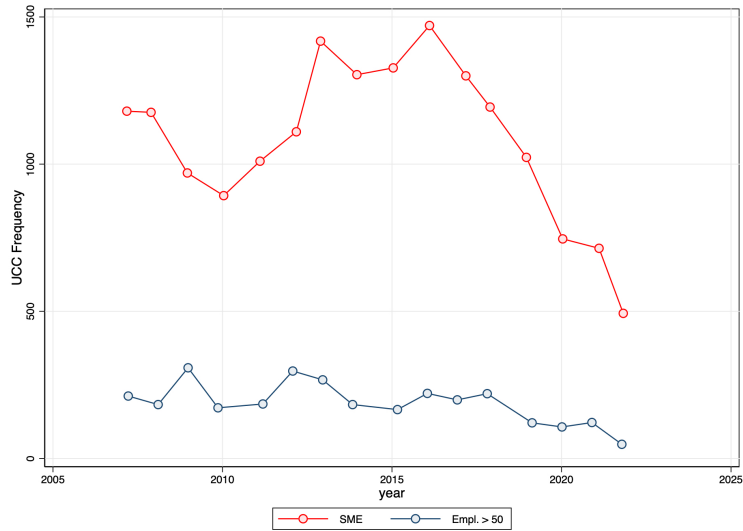


Figure 18: UCC filings across Empl. Size

Note: This figure shows the distribution of UCC filings (SIC (1) 7812) across filing statement types = originals. The figure is split in UCC filings across companies with less (more) than 50 employees represented by the red (navy) line. Note that UCC filings with 'secured party names' from public lenders are excluded in this figure.

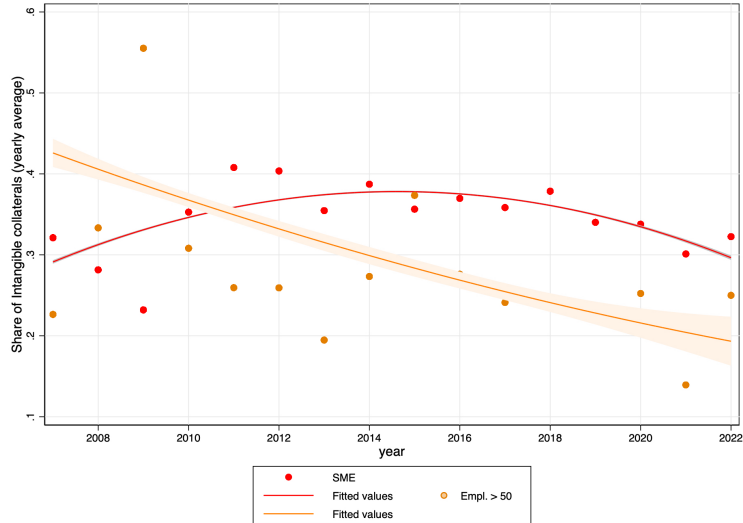


Figure 19: UCC Filings Share Intangibles and Empl.

Note: This figure shows the share of UCC filings with intangibles as collateral (SIC (1) 7812) across filing statement types = originals. The figure is split in UCC filings across companies with less (more) than 50 employees represented by the red (yellow) line. Note that UCC filings with 'secured party names' from public lenders are excluded in this figure.

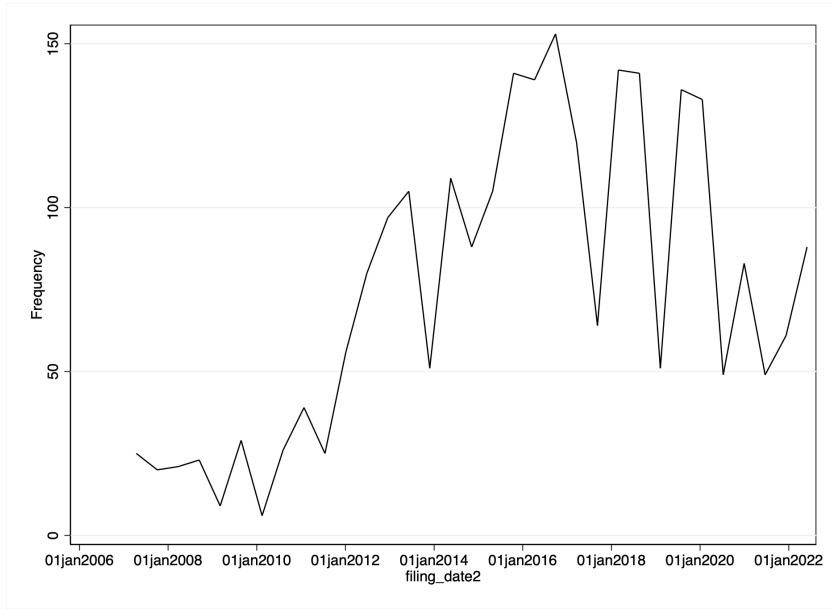


Figure 20: Syndicated Loans

Note: This figure shows the distribution of UCC filings (SIC (1) 7812) across filing statement types = originals. The figure approximates 'syndicated loans' by a text-search in the secured party name 'AS AGENTS, AS REPRESENTATIVE'.

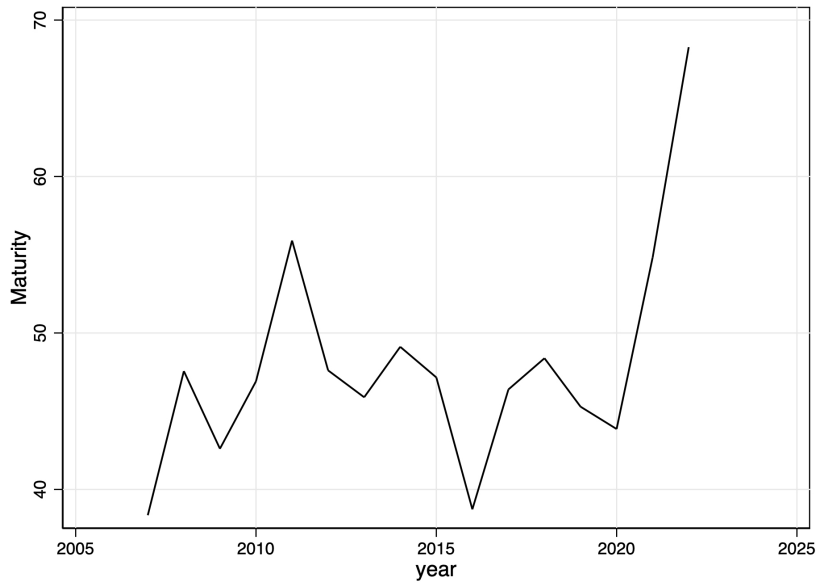


Figure 21: Loan Maturity

Note: This figure shows the distribution of UCC filings (SIC (1) 7812). The figure shows the yearly average loan maturity in months (filing date termination to original filing date).

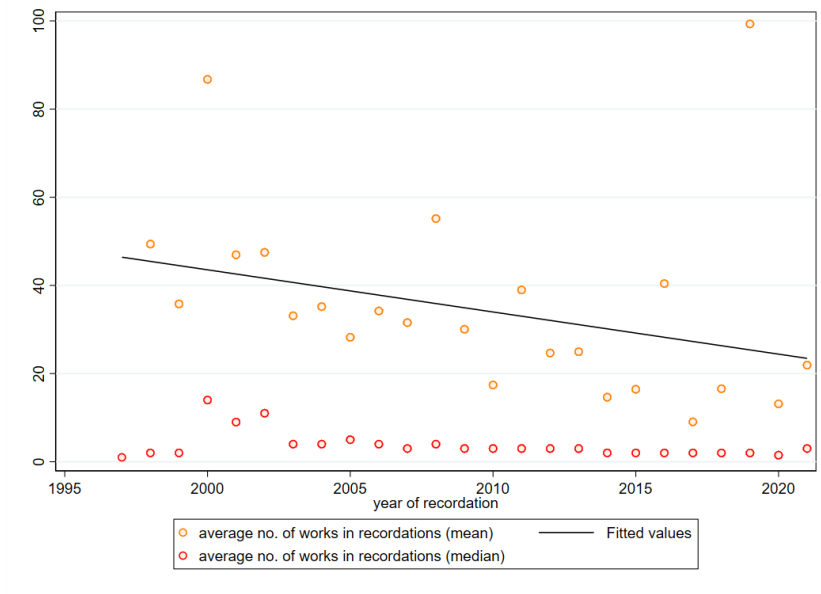


Figure 22: Average number of registered motion pictures per 'security interest' recordation by year of recordation

Note: This figure shows the mean (median) number of registered works per recordation and by year of recordation. Recordations in the matched sample relate to registered motion pictures only and recordations classified as 'security interest'.

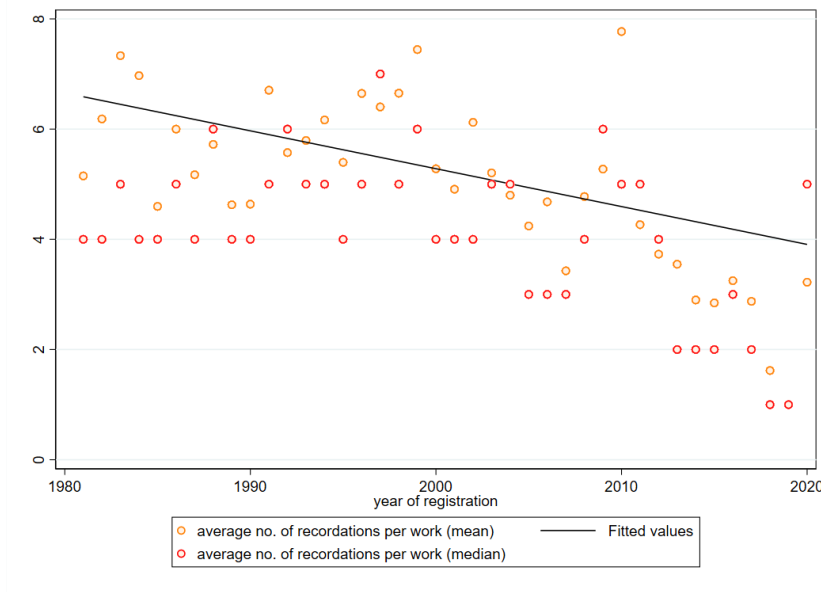


Figure 23: Average number of 'security interest' recordations per registered motion picture by year of registration

Note: This figure shows the mean (median) number of recordations per registered work over the observation period (1979-2021) and by year of initial registration. Recordations in the matched sample relate to registered motion pictures only and recordations classified as 'security interest'.



Figure 24: Annual number of total 'security interest' recordings of registered motion pictures by year of recordation, recordation level

Note: This figure shows the annual number of total recordings by year of recordation and classified as 'security interest' recordings (or with unknown type of recordation). Recordations in the matched sample relate to registered motion pictures only.

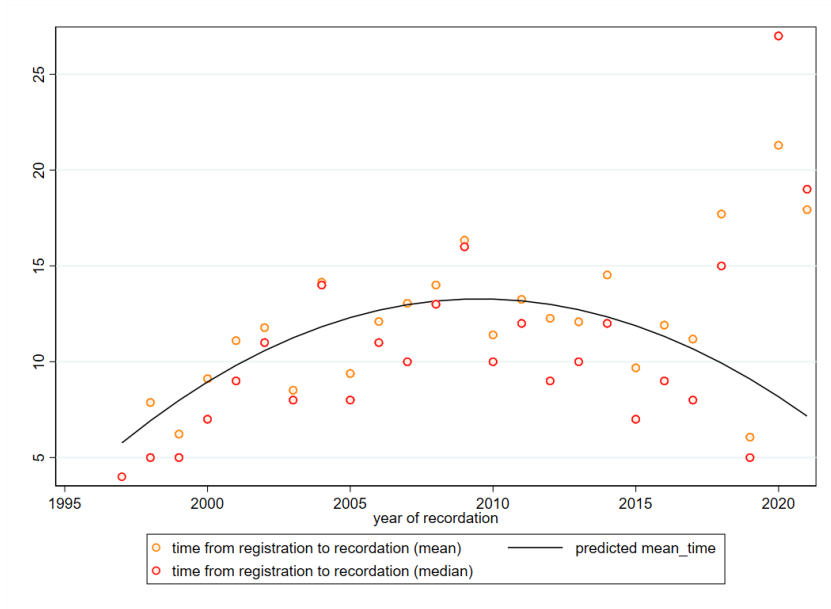


Figure 25: Average number of years from registration to 'security interest' recodation by year of recodation

Note: This figure shows the average number of years it takes until a registered work is recorded at the USCO as calculated from the year of initial registration, if recorded at least once. Mean (median) values by year of registration. Recordations in the matched sample relate to registered motion pictures only and recordations classified as 'security interest'.

Table 1: List of interviewees

Interviewee code	Interviewee description
SE1	Content distribution executive at major studio
Law1	Specialized film lawyer
SE2	Former major studio executive
SE3	Former major studio executive / specialized film lawyer
SE4	Content acquisition executive at major studio
Law2	Specialized film lawyer
Prod1	Experienced independent film producer
Econ1	Entertainment economist
Bank1	Entertainment banker
Law3	Entertainment lawyer
Bank2	Entertainment banker / former major studio executive
SE5	Streaming service executive / former distributor executive
Bank3	Entertainment banker
CG1	Completion guarantor executive
Prod2	Independent film producer
Prod3	Independent film producer
Prod4	Independent film producer

Table 2: Sample of slate financing deals announced since 2020

Party 1	Party 2	Year	Press source
CJ Entertainment	Library Pictures International	2020	Variety
Cross Creek Pictures	Kodiak Pictures	2020	Variety
Paramount Pictures	New Republic Pictures	2020	Variety
Lionsgate	Grindstone Entertainment Group	2020	Hollywood Reporter
Lion Forge Animation	Starlight Media	2020	Hollywood Reporter
Library Pictures International	Next Entertainment World	2021	Hollywood Reporter
FilmNation Entertainment	Range Media Partners	2022	Hollywood Reporter

Note: This table shows the top 30 debtors and secured parties for SIC Code 7812 and UCC-1 filing (i.e., filing statement type = originals). Total N = 20,278. U.S. Small Business Administration secured party is excluded from the sample.

Table 3: Top 30 Debtors and Secured Parties

Debtors			Secured Parties		
Name	Freq.	Percent	Name	Freq.	Percent
Weinstein Company LLC	441	2.17	JP Morgan Chase Bank	1270	6.26
Lions Gate Entertainment Inc	179	0.88	Corporation Service Company	605	2.98
Lions Gate Films Inc	123	0.61	De Lage Landen Financial Services	558	2.75
Pankratz Agri-Production Inc	114	0.56	Bank Of America	481	2.37
Alcon Entertainment LLC	111	0.55	Wells Fargo Bank	431	2.13
Reel Fx Inc	106	0.52	Screen Actors Guild	423	2.09
Atlas Digital LLC	97	0.48	US Bank	350	1.73
Relativity Media LLC	92	0.45	Western Equipment Finance	312	1.54
Missouri School Boards Assn	82	0.40	Writers Guild Of America	256	1.26
Radiant Images Inc	82	0.40	CT Corporation System	249	1.23
Maciver Corporation	81	0.40	Directors Guild America	230	1.13
Im Global LLC	72	0.36	Coactive Capital Partners	204	1.01
Convergent Media Systems Corp	69	0.34	Bank Of The West	202	1.00
Southpaw Productions Inc	69	0.34	City National Bank	199	0.98
Stx Financing LLC	66	0.33	Financial Pacific Leasing	195	0.96
Efd Usa Inc	65	0.32	Leaf Funding	192	0.95
Global Asylum Incorporated	63	0.31	Alliance Films	171	0.84
Quixote Studios LLC	63	0.31	Chtd Company	161	0.79
ABC Audio Rentals LLC	61	0.30	Deere And Company	151	0.74
Metro-Goldwyn-Mayer Inc	60	0.30	Citizens Bank	137	0.68
Screening Services Group LLC	59	0.29	Community Bank	134	0.66
High Technology Video Inc	58	0.29	Dell Financial	131	0.65
Foh Productions Inc	54	0.27	US Bancorp	127	0.63
Warner Bros Entertainment Inc	54	0.27	Comerica	121	0.60
Davis H Elliot Company Inc	52	0.26	General Electric	117	0.58
Village Road Show Pictures USA	52	0.26	Citibank	115	0.57
3g Productions LLC	50	0.25	Canon Financial Services	114	0.56
MN Production AG LLC	48	0.24	First Bank	105	0.52
Myriad Pictures Inc	47	0.23	Warner Bros	98	0.48
Universal City Studios LLC	43	0.21	The Huntington National Bank	97	0.48

Additional Materials

How copyright and other IP assets are managed in film finance

Secured lending in film finance is primarily backed by the copyright of the film being produced and in the U.S. any such transaction must be reported to the relevant authorities.

Before financing a film however, all existing IP rights (copyright, trademark, etc.) must first be cleared. This is particularly important in cases where the film is based on existing IP such as films based on books, previous films, trademarked characters and so on. This often involves entering into a contract to pay the owner(s) of the original IP for the rights to use their IP in the new film. Furthermore, the producer must secure an assignment of rights and a waiver of moral rights from all applicable parties. One interviewee (SE4) notes that *“Even though derivative works (based on books, etc.) can have higher budget ex-ante since that includes the costs of rights clearance, films based on such works can have lower risk around exploitation and future returns. This is because they build on, and mobilize existing audiences in the book market”*.

Once IP rights are cleared as applicable, the copyright of the film itself needs to be registered before certain types of finance can be accessed. These finance deals would then have to be recorded against the copyright registration. Since the film to be made does not yet exist, its copyright is ‘pre-registered’ at the U.S. Copyright Office. Pre-registration involves filing for copyright registration of the plot of the film, rather than the film itself. Financial interests in the movie may then be recorded against the pre-registered copyright at the federal level after film production has started (U.S. Copyright Office); and filed with the Secretary of State of the proper state as directed by the Uniform Commercial Code (UCC). Recordation and UCC filings of financial deals are known as perfection. Perfection of a financial claim grants that claim priority over competing non-perfected claims, a right that is particularly important in the event of bankruptcy and when the means is not available to meet all claims. Indeed an interviewee (Law2) notes that *“Very few deals go unregistered and unrecorded. Beyond recordation, UCC filings at the state-level are standard practice in the loan deals using IP.”* Recordation in official registers as a prelude to collateralizing assets for financing purposes is also available and recommended for other film-related IP assets such as trademarks.

The importance of grants for new producers

New producers often start their careers by producing small-budget short films. These short films are often unprofitable, but allow new producers to practice and display their skills on a limited budget. For these sorts of producers, grants are very important. In the U.S., foundations and charities play a major role in providing grants for short films that meet criteria that they have set out. Often there is no requirement that the film makes money and producers get to keep most or all of the intellectual property (IP) rights to their film as well as potential upsides. For a new producer making a grant-funded film is often an iterative process of working on the film and seeking grants. Thus, a typical production might involve developing an idea and a pitch and then seeking out grants to cover research and script writing, production, post-production and festival passes and screenings.

It is important to note that just as every producer’s process is unique, so is every grant, and certain grants may cover the entire budget of the film, or multiple stages of film-making. Producers may also find that grants they have received to cover certain stages of film-making are not adequate and may thus be compelled to seek additional funding.

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Suggested citation: Cuntz, A, A Muscarnera, P C Oguguo and M Sahli (2023), “IP assets and film finance - a primer on standard practices in the U.S”, WIPO Economic Research Working Paper No. 74, Geneva: World Intellectual Property Organization.

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