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SOFT INFORMATION, HARD SHELL:  
THE ROLE OF SOFT INFORMATION IN THE PRICING OF  
INTELLECTUAL PROPERTY – EVIDENCE FROM SCREENPLAYS SALES

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Soft Information, Hard Shell: The Role of Soft Information in the Pricing of Intellectual Property  
– Evidence for Screenplays Sales  
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**ABSTRACT**

There is a growing literature on the differential impact of "soft" vs. "hard" information on organizational structure and behavior. This study is an attempt to empirically quantify the value of soft information, using a data-base on the market for screenplays. Script quality is difficult to estimate without subjective evaluation. Therefore soft information should be an integral part of the pricing of these intellectual assets. In our empirical analysis, we find that "hard information" (reputation) variables as well as "soft information" proxies are priced. Screenplays with high soft information content are priced significantly lower than "high concept" "harder information"- type scripts. We also follow the screenplays to production, and find that buyers seem to be able to forecast the success of a script, paying more for screenplays resulting in more successful films. In other words, "high concept" (harder information) screenplays sell for more and result in more successful movies.

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## I. INTRODUCTION

There is a growing literature on the role of soft information in organizations.<sup>2</sup> The theoretical literature focuses on the impact of soft information on organizational structure, whereas most of the testing was done in the banking sector. Stein (2002) suggests that in the presence of soft information, decentralization can allow good projects to be funded properly. He defines soft information as the ability to credibly communicate information to an outsider – in this case, a CEO. Faure Grimaud et al. (2002) consider an organizational structure with a principal, supervisor and agents. The information structure is nested, and as in Stein (2002), soft information in this context means information that cannot be credibly communicated to an outside agent. The paper itself is concerned with coalition formation and collusion, and develops an optimal organizational structure.

Important recent applications of the concept of soft information have focused on the banking industry. Petersen (2002) suggests that soft information has been in the background but not necessarily the foreground of various theoretical papers, including the ones we mentioned. His survey discusses empirical work, suggesting that small banks tend to prefer to work with soft information whereas larger banks work better with harder information. Empirical tests show that firms that are less informationally transparent have a lower probability of loan approval. Further, such firms tend to do better with smaller banks that can better evaluate soft information. Berger et al. (2003) is the most recent paper finding support for this view using a matched sample of banks and firms. The banking literature also relates soft information issues to distance between the bank and the firm in question.<sup>3</sup> Similarly, Liberti (2002) finds that a more decentralized structure increases reliance on soft information in Argentinean banks, consistent with Stein's (2002) characterization.

Petersen (2002) provides some specific characterization of hard information; hard information is numerical, it is gathered in an impersonal way, and it is valued the same way by different people. He suggests that markets have recently been using less soft information, and he also relates it ultimately to the relative costs of quantification. In

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<sup>2</sup> See, for example Stein (2002), Faure, Grimaud, Laffont and Matrimont (2002) and in a less formal sense Baker, Gibbons and Murphy (1994), and Laffont and Tirole (1997).

<sup>3</sup> See Petersen and Rajan (1994), Petersen and Rajan (2002) in addition to Berger et al. (2003).

contrast, Baker et al. (1994) suggest that contracts based upon subjective assessments can improve upon objective contracts, regardless of relative costs. The paper argues that there is some aspect of value-relevant performance that is too complex to quantify, hence objective measures are imperfect and subjective measures can help. This characterization is perhaps closer to the notion presented in this paper. We propose a slightly more formal definition of soft information, and we use this as the basis for testing the proposition that the fundamentally subjective nature of soft information itself affects valuation. Our empirical analysis focuses on the film industry – a setting in which the inputs to the decision-making process have a high level of soft information. We use a unique data set to study the impact of the information content on the pricing of screenplays and ultimately, on the success of the movies that are produced based upon these scripts.

## **II. A CONCEPTUAL MODEL OF SOFT INFORMATION**

Consider a simple decision model with data inputs and a single output – a yes or no decision, such as loan approval, project funding, script purchase, a decision to operate on a patient, or a choice to hire an employee. Data inputs may take many forms: narrative, visual, numeric or verbal. A strictly quantitative model relies solely on numerical data as inputs. Quantitative models may also include hedonic specifications that code qualitative inputs into quantitative values. Visual, narrative and verbal data cannot easily be adapted to such a model unless they can be systematically coded – that is, the data can be mechanically and unambiguously translated into a numeric code. Mathematical functions can process quantitative information, but humans (i.e. human cognitive functions) are needed to process the additional signals. Thus soft information can either be defined as non-numeric input to a decision-making process or it can be regarded as data for which human cognition is required to convert it into decision-relevant information. One distinctive feature of soft information is that the need for human cognition means that no two functional mappings will precisely match due to the fact that no two people are alike.

For example, in a home mortgage approval decision, inputs might include the income and financial assets of the borrower, the loan to value ratio, and an extended discussion with a bank officer regarding the plans for use of the proceeds from the loan.

The clear quantitative inputs are the income and financial assets. The loan to value ratio [LTV] in fact shares some of the characteristics of a soft information variable, since, although quantitative, it relies upon the subjective evaluation of a property appraiser. However, most economists interested in soft information would regard the LTV as hard information because it is ultimately numeric. The conversation with the loan officer is archetypical soft information – it is potentially relevant to the decision, but not mapped explicitly into a number such as “the officer’s numeric assessment of the probability of default.” If, in this example, the bank finds that its loan decisions are better [i.e. the NPV is greater] when they include a conversation between an officer and the borrower, then soft information is value-relevant to the model. In this example, the conversation is the soft information, and the bank officer supplies the human cognitive processing function. Thus, the difference between hard information and soft information must lie not only with the information itself, but the processor needed to use it.

Another way of thinking about soft information is simply as the opposite of hard information. Perhaps it is the fuzziness or noise in a quantitative model or specification that cannot be reduced through collecting more data. Consider, for example, a point on a two dimensional plane with coordinates  $(x, y)$  and a sender of a message and a receiver. The sender sends a message and the receiver is trying to identify the point. If the information enables any receiver to identify the point with certainty, then this is hard information. If the information provides only a confidence interval or a space around the point, that is, a larger area  $X+C; Y+D$  where  $C$  and  $D$  are positive, then this is soft (i.e. noisy) information. This definition combines definitions such as Petersen (2002) and others, which describe hard information as numerical, and fits the banking context of soft information. For example, after an interview a credit officer can say: “this person presents good credit risk” this is soft information, since it provides only a bound around the exact credit evaluation of the person. On the other hand, the information may be: “he was delinquent three times, his mortgage is 500,000 which combines to a credit score of 4.2”. Notice, that even in the latter case we still do not know whether or not the person will pay the loan, however, the information is hard<sup>4</sup>.

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<sup>4</sup> Is this view of soft information isomorphic to other definitions (such as Laffont and Tirole (1997) and others) which differentiate between the two types of information by the cost of transmission? In some

Thus far, the main institutional settings in which soft information has been discussed are in the financial industry, where soft information is typically one element in a decision-making process. However, in this industry there are quite a few objective, numerical measures that can be evaluated in a standard framework by agents in the organization. Our empirical setting for this paper is an industry where soft information is considerably more important. The broadest conceptualization of the film industry is that it is a mechanism for turning ideas into profit. Regardless of one's personal views on the aesthetic quality of Hollywood productions, it is undeniable that a major portion of the industry is devoted to the solicitation, evaluation, screening and business assessment of artistic projects. Many of these projects begin as script concepts that are read by agents, pitched to studio professionals, reviewed within studio companies, discussed and approved or rejected at meetings, optioned or purchased by studios through simple or contingent contracts, revised and re-written as part of the production process and finally reviewed by industry participants for awards. This trajectory is common to many artistic endeavors. However, unlike non-commercial aesthetic creations, such as art produced by not-for-profit enterprises, products of the film industry are subject to the judgment of the marketplace. Thus, the aesthetic characteristics of the project – in our case, the quality of the script – can matter a lot, economically. A film can have all the elements of a past box office hit – talented cast, the requisite number of chase scenes and love scenes and great special effects and still be a flop if the script is not good. Much of the evaluation of quality is based upon the economic processing of soft information. This makes the film industry an excellent laboratory for the study of the role of soft information. Whereas previous research has relied upon indirect or residual measures of soft information effects (cf. Berger, Miller, Rajan and Stein, 2002) with movie industry data we can directly study intellectual property sales, where soft information is an integral part of the transaction. In particular, we will gauge the complexity and depth of information available about a project and relate this to its price.

We adopt complexity as a convenient measure of soft information, because simple information is presumably easier to quantify. Recall that our definition suggests that

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sense, the answer to this question is yes. That is, you can investigate more and more and make soft information increasingly harder.

assets whose value depends on soft information will tend to be evaluated differently by different people. In the case of screenplay sales, since many people are involved in the decision, soft information can cause a divergence of views and make sale at an agreed-upon price more difficult. A script with a short, simple description like “A buddy story set in the Wild West” is low on soft information content, and thus more easily evaluated and agreed upon by industry participants. Our other measure directly assesses the information content available to the purchaser of screenplays.

### **Predictions**

The hypotheses we test are rather straightforward. The first, most general hypothesis is that soft information as well as hard information is priced in sales of intellectual property – in other words, we can quantify the impact of soft information on prices paid. The second hypothesis is that a high ratio of soft to hard information will lower prices. Since one measure of hard information about screenplays is the reputation of the writer, we will also test a third hypothesis, which is much more obvious; that (measurable) reputation is priced in intellectual property sales.

In the second part of the paper, we will test how this pricing function ultimately affects valuation of the finished product, in this case revenues and rates of return.

### **III. DATA, BACKGROUND AND VARIABLES**

The process of turning an idea into a completed movie is complex and long. Not only is it difficult to get a screenplay produced, but it is difficult to even get an idea reviewed. One can register a screenplay with the Writers Guild of America (WGA), however, a writer will need an agent in order to submit a screenplay to a studio or production company. Getting an agent may not be trivial either – quite a few agencies do not accept unsolicited manuscripts (see WGA.org), and represent only people who are referred by people they know. Once a writer has representation, an agent may submit a screenplay to be evaluated by a production company. Most major studios have several layers of screening before a script ends up actually in the hands of someone who can make a purchase decision. This latter decision can come in several ways. A screenplay may be optioned. That is, a studio may pay an agreed-upon amount, typically 10% of the

total estimated sale value and in return it will have some time, typically 18 months, to study the screenplay. During the option period, the screenwriter is not allowed to sell the script to anybody else. This “option” period can be extended. At the end of the period, the script may or may not be purchased. WGA sets minimum prices for screenplays (which are currently around \$50,000 for a low budget movie and up to \$90,000 for a high budget film). Most purchases in our data set are at much higher prices. However, a purchase (which is when the screenplay appears in our data), even at a very high price, is no guarantee of production. It may still take a while for anything to happen -- first, screenplays are “developed,” that is, changed, re-written and adapted to both the creative and pragmatic (budget) requirements of the purchasing entity.<sup>5</sup> Then, even if everybody is happy with the final write-up there may not be a studio that is willing to finance and distribute the film.<sup>6</sup>

Fundamental to the entire process is the “pitch.” That is, the basic concept of the screenplay boiled down to a parsimonious narrative that can be delivered in a paragraph or two or verbally by a writer, agent or another intermediary in the process. The pitch must have all of the necessary elements to explain the potential appeal of the story, without the complexities and detail of the actual script. A script with a simple pitch is characterized as a “high concept” script. The common belief in Hollywood is that a high concept script is more valuable, and easier to sell to readers and producers.<sup>7</sup>

We gather data on the screenplay “pitch” or “logline,” (the description used to sell the script) as well as screenwriter compensation, screenwriter reputation, script complexity, and movie financials and characteristics from various sources. Our main source of information is the 2003 *Spec Screenplay Sales Directory*, compiled by Hollywoodsales.com. It contains approximately six years of screenplays sales. The information provided on each sale includes: title, pitch, genre, agent, producer, date-of-

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<sup>5</sup> A playwright contractually controls a play written for the theater- no one is not allowed to change her lines. In the movie business this is very different. Don Jacoby, who received 1.5 million dollars for his script told Variety in November 1998 "Not eight words from the original script were in the movie".

<sup>6</sup> The film industry boasts a large number of people who make a very nice living writing screenplays but rarely if ever seeing anything actually produced.

<sup>7</sup> Cf. Orr, Bonnie, “High Concept,” *Screentalk.biz*, <http://www.screentalk.biz/art043.htm>. See also: Lerch, Jennifer, 1999, *500 Ways to Beat the Hollywood Script Reader : Writing the Screenplay the Reader Will Recommend*, Fireside Press. Also. Downs, William Missouri and Robin U. Russin, 2003, *Screenplay: Writing the Picture*, Silman-James Press.



sale, purchase price, and buyer. Sometime additional information regarding the particular screenplay is provided. This information is generally positive, but it may be more “neutral” in nature, for example, that a production deal is sought. There are 1,269 scripts in our sample.

We have a purchase price for 788 scripts (62.09% of the total sample). The purchase price may be an exact number (which we have for 224 scripts, 28.42% of scripts with available purchase price, 17.65% of the total sample). In other cases, *Spec Screenplay Sales Directory* may record an approximate price (554 scripts). This is generally recorded as, for example, mid- 600’s, or low 400’s. In the latter case, we transform the price range into a best estimate (for instance, low five figures is transformed into \$25,000; high six figures is transformed into \$750,000). Using these numbers and transformations, we analyze the data further.

Screenwriters may be offered two types of contracts. The first is a fixed payment, non-contingent contract. There are 299 (38%) such screenplays in our sample. Alternatively, the screenwriter may be offered a contingent contract -- 489 of the scripts in our sample fit this description. In a contingent contract the screenwriter receives an initial payment upon contract signing and an additional amount if the script is produced. Average compensation in non-contingent contracts is (in thousands) \$1,204.19 (standard deviation, 4,314.66). In contingent contracts, the average initial payment is much lower, \$405.06 (standard deviation, 411.28); total compensation if the script is finally produced is \$882.38 (standard deviation, 900.22).

A screenplay, as we explained earlier, needs to pass several layers of approval. The logline is the first step in that process, and is widely regarded as a vital part of getting the project accepted by an agent and then a studio.<sup>8</sup> In order to assess the soft information in the logline, we start with a simple measure, namely, the number of words. The theory is straightforward. – if a concept is complicated, then more words are required to describe it<sup>9</sup>.

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<sup>8</sup> For example, see web advice on crafting the logline. <http://www.inktip.com/tips-loglines.php> .

<sup>9</sup> In recent years the theory and practice of automated evaluation of texts has been progressing rapidly. Yet, as we discussed, it would be difficult to quantify a measure for soft information. At this stage of progress it is not clear that a machine can indeed perform a sufficiently transparent analysis. Therefore, we preferred the simplest measure, namely, the number of words. Chevalier and Mayzlin (2003) consider the number of characters in reviews posted for books sold on Amazon.com and BN.com as a value measure. Their

Out of 1,269 scripts, the Directory reports logline for 1,218 scripts (95.98%). The average logline description contains 25.92 words (standard deviation is 13.65). Since the number of words is a rough approximation, and different types of descriptions require more or less words for the same level of complexity, we created a coarse division to approximate the fundamental differences in complexity. Our variable *soft\_words* equals 0 if the logline contains less than 20 words; 1 if the logline contains between 21 and 30 words; 2 if the logline contains between 31 and 40 words; and 3 if the logline contains more than 40 words. The logline may be just descriptive or may contain references to existing movies. Eighty-five scripts (6.97% of the scripts for which we have the storyline) mention at least one movie in the story line (56 mention 1 movie, 29 mention 2 movies). We assume that analogy or reference to other movies makes the logline more transparent. Additional information is provided for 573 scripts, (45.15% of the sample). This information obviously makes the script easier to interpret. We create a dummy variable for the availability of additional information.

The discussion of soft information in the previous section should make it clear that it is very difficult to measure soft information precisely. Thus, even if we have the correct characterization, most of the action should probably be in the extreme cases. We create a very simple script complexity index, *Transparent Script*, that equals 1 when the log line contains less than 20 words (i.e. *Soft\_Words* equals 0), and additional information about the script is available (i.e. *InfoDummy* equals 1 ). *Transparent Script* is equal to 1 for 217 scripts (17.1% of the sample).

Genres are commonly considered to be important variables in studies of films (for a recent example see DeVany, 2004). Four hundred and sixty five scripts (36.64% of the sample) are assigned more than one genre (453 are assigned two genres, 11 three genres and 1 four genres). We group the different genres reported by Spec Screenplay Sales Directory into six broad categories: action (189 scripts), comedy (571 scripts), drama (257 scripts), romance (257 scripts), thriller (224 scripts), and other (123 scripts). Genres can be control variables (i.e. compensation may be higher for certain genres than for

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findings suggest that longer reviews are required to support a “mixed” review, i.e. 1 star (worst) and 5 star (best) reviews are associated with shorter reviews. This is consistent with our view of length as a measure of complexity and nuances. Godes and Mayzlin (2003) find that more complicated measures are very noisy. For a discussion and implementation of some of the automated methodologies see for example Tetlock (2003).

others), but can also serve as a measure of complexity, namely, if more than one genre is assigned to a screenplay that may indicate more complexity and a higher component of soft information.

The next set of variables describes our “hard information” set, namely, the screenwriter’s reputation and past success. Many papers show that reputation matters. John, Ravid and Sunder (2004) show that the re-hiring decision of film directors depends on their past success. To measure screenwriter reputation, we search the Internet Movie Database (IMDb) for the number of scripts previously sold by the screenwriter and produced. If we find no entries, we also search our own data-base to see if any screenplay had been previously sold by this writer. The average number of previously produced scripts is 2.0236 per screenwriter (standard deviation, 5.5593). The writers of 730 scripts (57.52% of the sample) have not sold any previous work. *Reputation Movies* takes the value 0 if the screenwriter has never had any screenplay produced (as per IMDB); 1 if the screenwriter has had between 1 and 3 scripts produced (which is the case for 348 scripts, 27.42% of the sample); 2 if between 4 and 10 scripts have been produced (142 scripts, 11.18% of the sample); and 3 if the screenwriter has previously had more than 10 scripts produced (49 scripts, 3.86% of the sample). If we cannot find any produced screenplay in IMDB and no previous sale in our data base, then our *experienced writer* variable receives a value of zero. We use additional reputation variables. *Nominated Oscar (Awarded Oscar)* takes the value 1 if the screenwriter had been previously nominated to (had won) an Oscar. *Any Nomination (Any Award)* takes the value 1 if the screenwriter had been previously nominated to (had won) an award in any of the major festivals tracked by IMDb: Oscars, Golden Globes, British Academy Awards, Emmy Award, European Film Award, Cannes, Sundance, Toronto and Berlin. For 71 scripts, the screenwriter had been nominated in a major festival; in 32 cases, the screenwriter has previously won an award in a major festival; in 27 cases, s/he had been nominated to an Oscar; and for 10 scripts, the screenwriter had previously won an Oscar. Finally, an unknown screenwriter may use a manager to compensate for his lack of reputation. Spec Screenplay Sales Directory reports that the screenwriters who wrote 172 of the scripts sold (13.55% of the total sample) employ a manager.

The Internet Movie Database (IMDb) reports all films produced or that are in production. 311 scripts (24.51% of the total sample) have been produced or are in production as of December 2003. It is virtually certain that more screenplays will be produced in the future, especially from the most recent acquisitions<sup>10</sup>. Thus, although we do run a regression for the probability of being produced, we do not consider the results an important part of our analysis. On the other hand, we can certainly evaluate the projects produced and compare them to the screenplays that generated them.

For each movie produced, we obtain its financial performance from Baseline services in California. Specifically, we have the budget of each film, domestic revenues, international revenues as well as video and DVD revenues. We use two measures of return. One is total revenues over budget, and the other is total revenues over budget plus advertising and promotion expenditures<sup>11</sup>. For each film we obtain several additional control variables. MPAA ratings (in particular, family friendly ratings) have been shown to be a most important determinant of revenues and returns in a number of previous papers<sup>12</sup>. We obtain ratings for all films released. Interestingly, our sample of films produced tends to be somewhat skewed – there are no G rated films, and more PG-13 than expected (see MPAA.org or Ravid (1999) for a discussion of the distribution of ratings). It seems that G- rated films and in general family films, which also tend to be the most successful (see Ravid (1999), Simonoff and Sparrow (2000), De Vany and Walls (2002) or Fee (2002)) are developed “in house” rather than as a result of purchases of outside screenplays.

We use several additional control variables. Star power can, in principle, significantly impact box office revenues<sup>13</sup>. To assess star qualities, we use IMDB, which provides a list of the director, and up to 8 main cast members. We then classify each cast

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<sup>10</sup> “If you aspire to be a screenwriter, you should look at your work as a process that will come to fruition over time- perhaps a long time” writes Peter Miller (1998) in a book (p.90) for newcomers to the business.

<sup>11</sup> In spite of industry wisdom, promotional expenditures are highly correlated with the budget (see Ravid and Basuroy, 2004). Therefore the two indices are highly correlated. Although we do have rental numbers i.e. what the studio collects of the revenues, we do not have comparable numbers for home entertainment, where contracts are more complicated. Thus, for consistency, we use total revenues as a measure of income. Rentals are roughly half the revenues for theatrical exhibition, but not so for home entertainment revenues.

<sup>12</sup> See for example, Ravid (1999), Ravid and Basuroy (2004) Fee (2002), DeVany and Walls (2002) or Simonoff and Sparrow (2000).

<sup>13</sup> In Ravid (1999), however, star power did not end up being a significant determinant of either revenues or return on investment.

member following a similar procedure to the one used to measure screenwriter reputation. The variable *Cast Nominated Oscar* counts, for each film, the total number of Oscar nominations for the film's 8 main cast members, previous to the film's production date. *Cast Awarded Oscar*, *Cast Any Nomination* and *Cast Any Award* have a similar interpretation.

Alternatively, we use IMDB *Starmeter* to classify an actor as a star. *STARmeter* uses proprietary algorithms that take into account several measures of popularity for people and titles. The primary measure captures who or what is being viewed on the public IMDb.com website. Other factors include box office receipts and user quality votes on a scale of 1-10. The rankings are updated on a weekly basis. We classify an actor as a star if he or she has a Starmeter ranking higher than 150 in the first entry in January of the year the movie is released. For example, Edward Norton was the lead character in the film *The 25<sup>th</sup> Hour*, released on December 19, 2002. Norton's ranking on January 6, 2002 was 99, so that according to the Starmeter classification, he would be classified as a star<sup>14</sup>. Our *Starmeter* variable counts for each film (similar to other cast reputation variables) the total number of cast members who were classified as stars in January of the year the movie was released. Using the different reputation variables, we create dummies as alternative measures of cast stardom. Thus, *Cast Dummy Awarded Oscar*, for instance, takes the value one if any cast member has been previously awarded an Oscar<sup>15</sup>.

We use several additional variables. The publication *Variety* lists reviews for the first weekend in which a film opens in New York. Although reviews are provided for other cities, the "New York" reviews are usually the first to appear, contain the largest number of reviews, and include national listings as well (such as broadcast network reviews or national magazines). Thus we use the New York reviews in our analysis. The total number of reviews, *Total Reviews* proxies for the attention the movie receives<sup>16</sup>. In

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<sup>14</sup> We experimented with star meter rankings of the highest 50 or highest 100, but that did not change the qualitative results. None of these variables was significant.

<sup>15</sup> Following with our example, *Cast Dummy Awarded Oscar* takes the value one for the film *The 25<sup>th</sup> Hour*, since one of the film's cast members, Anna Paquin, received an Academy Award in 1994 for his role in the film *The Piano*.

<sup>16</sup> Ravid (1999) found that the total reviews variable significantly affected movie performance in his sample.

its Critix pix column, Variety classifies reviews as “pro”, “con”, and “mixed.” We use these classifications to come up with measures of the quality of critical reviews: *Positive Reviews* is the ratio of number of “pro” reviews divided by the number of total reviews. *Non-Negative Reviews* is the ratio of non-negative reviews (i.e., good plus mixed) divided by the number of total reviews<sup>17</sup>.

Finally, we looked up each film’s release date. In some other studies (Litman 1983; Chisholm 2000), release dates were used as dummy variables, on the theory that a Christmas release should attract greater audiences, and on the other hand, a release in a low attendance period should be bad for revenues. However, since there are several peaks and troughs in attendance throughout the year, we use information from Einav (2003), which provides a ranking for each week of the year<sup>18</sup>.

## IV. RESULTS

### 1. Hard information, Soft Information and Screenplay Pricing.

Table I suggests that two elements are salient in the screenplay price – screenwriter reputation and soft information. We see that the number of movies previously credited to the screenwriter dramatically increases the compensation. Reputation and experience matter -- if it is a writer’s first movie, he or she receives significantly less money. Similarly, writers who have written more screenplays (reputation movies = 3) are significantly less likely to receive a contingent contract, which has a risk-sharing element. Nomination of any kind increases the writer’s compensation significantly. Surprisingly, it seems that receiving an Oscar is less valuable than being nominated, however, we should recall that we only have very few academy award winners in the sample. Thus, panel B suggests that the “hard information” component is important for pricing.

The next panel includes “soft information” variables. The results suggest that shorter (“high concept”) loglines (soft-words=0) are associated with much higher

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<sup>17</sup> In Ravid (1999) only the total number of reviews mattered. However, Eliashberg and Shugan (1997) as well as Basuroy et al. (2003) found that reviews significantly affect the weekly revenues.

<sup>18</sup> Another variable that may be of interest is whether or not a film is a sequel. While sequels tend to be more expensive and bring in lower revenues than the original film, they may still outperform the average film if they can capitalize on a successful formula. Ravid (1999) supports this view. However, for obvious reasons we do not have sequels in our sample.

payments, and a lower probability of a contingency pay. Similarly, screenplays that provide additional information are rewarded for it, and a “transparent script”, which is a composite of the two measures, is worth almost three times as much as a “non-transparent” one. Genres may play a role, but the role is unclear from the tabulation above. (Unreported) medians of our variables tell the same story.

Regressions test the hypothesis of a relationship between soft information, compensation and deal structure.<sup>19</sup> Table II reports a regression in which the dependent variable is the price paid in either contingent or non-contingent contracts. For contingent contracts, the dependent variable is the price paid if the movie is not made, that is, upfront. In the case of non-contingent contracts, we use the price actually paid. The results seem to confirm the findings in the means tests.

In all regression specifications, the genres and even the manager variable add virtually nothing to explanatory power. The only significant variables are reputation variables, such as the number of films the screenwriter had written, or nominations for major awards, (which are our “hard information” variables), as well as several soft information variables, in particular, when they interact with low reputation. Specifically, we find that the longer the log-line the lower the price, and the more information is available the higher is the price paid. The significance level increases for “low reputation” (first time) screenwriters. However, the most significant variable is “transparent script”, which describes screenplays with additional information and for which the log line contains less than 20 words. The lower is the “soft information” content, as measured by “transparent script,” the higher is the price. This makes sense. If a screenwriter has a sterling reputation, a studio may be willing to buy a much softer product from him or her. However, if he or she is untested, they had better have a very clear “high concept” script at hand.<sup>20</sup> As a rough estimate, we can say that having sold a previous movie increases the price received by roughly a half a million dollars. However, a transparent screenplay is worth over \$1 million more.

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<sup>19</sup> All regressions are tested for multicollinearity and the standard errors are White heteroskedasticity adjusted standard errors.

<sup>20</sup> This result is conceptually similar to the finding in the banking literature that small, opaque firms have more difficulties in obtaining credit, and prefer working with smaller banks which can better handle soft information (see Petersen (2002) and Berger et al. (2003)).

Table III presents similar tests for the subset of non-contingent contracts in which a firm price is established. The results are qualitatively similar, but the explanatory power is higher. The  $R^2$  increases in the first and last columns to about 38% from 27%. As before, soft information variables, and in particular “transparent script,” are significant and so are reputation variables. For low reputation screenwriters even the genre-related soft information approximation (characterizing a screenplay that had to be classified by several genres) significantly reduces the price paid. Again, soft information matters more for the less well-known writers.<sup>21</sup>

This latter soft information variable is also significant in table IV, which measures the initial compensation in contingent contracts. All previously significant variables are significant here as well. Interestingly, the genre of the film does not matter – in other words, it seems that studios are eclectic in what they are willing to buy. Here, however, the “manager” variable has a negative value – having a manager is associated with a lower price up front.

Table V presents a probit regression estimating the likelihood of receiving a contingent contract. In principle, such contracts should not be offered to risk-averse screenwriters. A risk neutral corporate entity should be willing to take the risk and pocket the risk premium while offering a risk-averse writer a lower compensation. However, as argued in Ravid and Basuroy (2004), it seems studio executives are more risk averse than they should be, and thus, as risk increases, they may want the writer to share it.

High concept screenplays by well-established writers should be the least risky, and thus should not require contingent contracts to address uncertainty. This comes through clearly in our test. Writers are less likely to receive a contingent contract if they have sold more screenplays. There is an interesting contrast between this result and the findings of Chisholm (1997). Chisholm discusses the probability that actors receive a share contract (as opposed to fixed compensation). She finds that more experienced actors are, if anything, more likely to receive share contracts. Chisholm’s findings support the Gibbons and Murphy (1992) and Holmstrom and Milgrom (1992) interpretation of the life cycle of contracts. Experienced actors may need more incentives since their reputation will not be tarnished by one less successful movie, or they may be

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<sup>21</sup> Action films command a lower price as well. We are not sure why this is the case.



closer to retirement. However, in the case of screenwriters, a contingent contract only reflects uncertainty as to the prospects of the product, which are diminished with experience.

All complexity variables, including the two variables reflecting the number of words in the log line, and including the number of genres, seem to increase the probability of receiving a contingent contract, and similarly, if information is available the contract is less likely to be contingent. In other words, soft information of any kind seems to present a risk factor which the studios would like to share with the writer. If the writer can provide “hard information” assurances that the risk is lower, studios are willing to pay more upfront.

In Table VI, we report a probit regression estimating the probability of a screenplay being produced. Since it sometimes takes several years or more in development for a screenplay to become a movie, and since our last screenplay was sold in 2002, we have a right-truncation of the data. The specification suggests that screenplays by reputable writers seem to have an edge and similarly, low reputation and soft information seemed to delay production. In other words, the lower price paid for low reputation high soft information screenplays may be justified and there appears to be a lower probability of such screenplays making it to the big screen.

Our analysis thus far indicates that both hard information and soft information are priced in screenplays sales. Soft information in general lowers the price whereas (positive) hard information increases it significantly. Further, there seems to be an interaction between the two types of factors- low reputation further depresses the value of soft- information- rich screenplays. We turn next to examine the role of soft information in the success or failure of movies that are actually produced, and in the process, we are able to consider whether the first stage (screenplays) pricing makes sense.

## **2. Hard information, soft information and the success of films**

Table VII describes a sample of 151 films produced from the screenplay sample. The distribution of movie releases from our sample is somewhat skewed compared to a random sample – there are no G rated movies, fewer PG -rated movies, fewer R- rated movies and more PG-13 rated movies than in a random sample, (see Ravid, 1999, and

MPAA.org). It seems that the most profitable family movies tend to be developed in house, rather than purchased from outside screenwriters. However, the pattern of profitability in the films produced is similar to that of most other studies, (c.f. Ravid, 1999, DeVany and Walls, 2002 Fee, 2001, and Simonoff and Sparrow, 2000). PG rating, the most family friendly rating is also the most profitable.

Table VIII compares the screenplays of first time writers vs. experienced writers. Films based on scripts by first time screenwriters have lower budgets, as expected. However, their rate of return is higher. These differences in performance, however, are not statistically significant. Interestingly, the reviews for films based upon “better” screenwriters’ work are worse than average and worse than for first time screenwriters. A similar pattern emerges when we classify screenwriters according to any nomination, however, here films by more reputable writers receive somewhat better reviews. We also note that, as expected, whereas 57% of the screenplays in our sample were produced by first-time screenwriters, only 46% of the sample of films produced are based on screenplays by first time writers.

We sought to explain the components of revenue (domestic, international, video and DVD as well as total revenues and rate of return) by control variables as well as the price paid for the screenplay.<sup>22</sup> We only report domestic (Table IX) and total revenues, which include revenues from all sources (Table X). The control variables that are significant are similar to those that mattered in other work – namely, family friendly [PG] rating, a seasonal variable and the budget. The star status of the cast does not make a difference (see Ravid, 1999, for similar results on a different sample, as well as DeVany, 2004). However the price paid for the screenplay is positive and significant in all regressions. Consistent with the idea that the industry is able to effectively process soft information and make rational economic decisions, it seems that if a studio pays more for a screenplay, the movie makes more money. Results are similar for other revenue components (not reported). However, other elements in the decision process of buying a

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<sup>22</sup> See Ravid (1999) and Ravid and Basuroy (2004) for a discussion of the methodology.

screenplay, which depend on actually making the films, were not significant in any of the regressions.<sup>23</sup>

Perhaps more interesting is the rate of return regression (Table XI). The control variables that matter are PG rating and seasonality, which mattered in other work (see Ravid, 1999, and Einav, 2003). However, the rate of return increases significantly with the price paid as well. This means that more expensive screenplays not only increase revenues, but actually increase profitability.

Finally, Table XII suggests another way of looking at the correlation between prices paid for a screenplay and the success of the resulting movie. Here we regress the price paid for the screenplay on soft and hard information variables as well as on a financial success variable for the resulting movie. We see that the price paid to the screenwriter essentially forecasts the success of the film, and that, even when this is taken into account, soft information significantly lowers the price paid to screenwriters. Reputation variables significantly increase the price. The results suggest that the market for screenplays is an efficient one. Screenwriters and their agents understand the economic potential of a script and set the price accordingly. However reliance on soft information as a signal of this potential appears to be a risk factor, the cost of which is borne by the writer.

## V. CONCLUSIONS

Aesthetic evaluation is central to the film industry. However, despite the message of the annual Academy Awards ceremony, the industry does not make art for art's sake – it processes complex inputs from many different fields of art with the ultimate goal of making a profit. This makes it an interesting setting for the analysis of the role and nature of soft information processing in an industrial setting. Our analysis of the trajectory of film scripts and the movies they eventually become suggests that “high concept” (low on soft information) scripts command a higher compensation. Further, films based upon such screenplays are also more successful. This may not be a shock to industry

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<sup>23</sup> This may be related to the fact that we do not have the complete set of produced films since some screenplay have a long gestation period. On the other hand, it may be that the value of the screenplay is easier to estimate than the probability of actually getting it produced.

participants, but it is interesting to economists who study the role of soft information in organizations.

Our major findings highlight the dual role of soft and hard information in the pricing of intellectual property. Reputation, which can be easily expressed in measurable terms, is very important, and increases the prices paid. However, a high ratio of soft to hard information depresses prices. That is, screenplays characterized in “softer” terms -- particularly if they are written by lesser known writers -- command substantially lower prices. Various manifestations of soft information seem also to increase the probability of a contingent contract, again, suggesting that soft information is viewed as a risk factor. Interestingly, the type of screenplay (drama, comedy, action) does not seem to affect the price paid. These results are consistent conceptually with findings in the banking industry.

In the second part of the paper we link the economic performance of the film with screenplay characteristics. We find that the industry can reasonably forecast how the resulting movie will perform. All else equal, studios pay more for screenplays that lead to movies with higher revenues and also higher rates of return. This finding certainly contradicts the view that production decisions are arbitrary and ill-informed. From an economic perspective, it suggests that pricing is efficient, even in an industry with a complex production function relying fundamentally on soft information. In addition, not only is the economic value of inputs to the production process well determined, but the quality and type of signals about the inputs are priced as well.

In recent years, quantification and statistical analysis have become increasingly important tools in business. Objective measures of inputs are manifestly important -- indeed our study verifies the value of objective recognition of past success. However, as quantification and measurement continue to rationalize business practice, the limits to these tools have become abundantly clear. Banks may never be able to eliminate loan officers. The soft information they provide -- the cognitive processing -- is still irreplaceable. Similarly, electronic script-reading automatons might be able to screen thousands of screenplays rather than relying upon agents and readers to filter them. However such complete mechanization is unlikely. Thus, in the interim we find ourselves

in a situation in which the ambiguity of human judgment is seen as a necessary cost of business.

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Panel A: Contract Summary Statistics				
		Price	Cont	Produced
Scripts with Compensation Information	788	778.36	0.6206	22.1
Scripts with Contingent Contracts	299			23.02
Scripts with Non-Contingent Contracts	489			19.09

  

Panel B: Screenwriter Reputation				
		Price	Cont	Produced
Reputation Movies	0	479	0.6290	0.1840
	1	765	0.6091	0.2786
	2	1,633	0.6667	0.2464
	3	4,761	0.3810	0.3261
Experienced Writer	0	479	0.6290	0.1840
	1	1,205	0.6081	0.2743
Nominated Oscar	0	702	0.6232	0.2172
	1	5,090	0.4615	0.4615
Awarded Oscar	0	770	0.6229	0.2199
	1	2,736	0.0000	0.5556
Any Nomination	0	620	0.6238	0.2104
	1	3,572	0.5609	0.3585
Any Award	0	765	0.6237	0.2169
	1	1,573	0.4166	0.4231

  

Panel C: Soft Information				
		Price	Cont	Produced
Soft_Words	0	1,050	0.6047	0.2016
	1	639	0.6065	0.2447
	2	496	0.6383	0.2227
	3	660	0.7157	0.2548
InfoDummy	0	638	0.6323	0.2058
	1	1,034	0.5985	0.2431
Tansparent Script	0	627	0.6210	0.2208
	1	1,735	0.6176	0.2297

  

Panel D: Genres				
		Price	Cont	Produced
Action	125	685	0.6617	0.2097
Comedy	344	752	0.6169	0.2157
Drama	109	613	0.6471	0.2621
Romance	105	1,046	0.7000	0.2241
Thriller	155	1,102	0.5342	0.1843
Other	67	587	0.6842	0.2773

**Table I: Summary Statistics.**

This table summarizes the relationship between screenwriter compensation, screenwriter reputation and script complexity. The last two columns analyze how screenwriter reputation and script complexity influence the type of contract offered to the screenwriter, as well as the probability that the script is ultimately produced. Price measures the compensation paid to the screenwriter. Cont is a dummy variable that takes the value 1 when the screenwriter is offered a contingent contract (i.e. a contract in which compensation depends on whether the movie is ultimately produced or not). Produced is a dummy variable that takes the value 1 if the movie is produced and 0, otherwise. We include several screenwriter reputation variables. Reputation Movies takes the value 0 if the screenwriter has not previously sold any script; 1 if the screenwriter has previously sold between 1 and 3 scripts; 2 if the screenwriter has previously sold between 4 and 10 scripts; and 3 if the screenwriter has previously sold more than 10 scripts. Experienced Writer takes the value zero if the screenwriter has not previously sold any script, and 1 otherwise. Nominated Oscar (Awarded Oscar) takes the value 1 if the screenwriter has been previously nominated to (won) an Oscar. Any Nomination (Any Award) takes the value 1 if the screenwriter has been previously nominated (won) to an award in the following festivals: Oscars, Golden Globes, British Academy Awards, Emmy Award, European Film Award, Cannes, Sundance, Toronto, Berlin. We also include several variables that try to capture soft information or script complexity. Soft\_Words equals 0 if the script logline contains less than 20 words; 1 if the script logline contains between 21 and 30 words; 2 if the script logline contains between 31 and 40 words; and 3 if the script logline contains more than 40 words. InfoDummy equals 1 if additional information about the script is available. We create a script complexity index, Tansparent Script, that equals 1 when the log line contains less than 20 words (i.e. Soft\_Words equals 0), and additional information about the script is available (i.e. InfoDummy equals 1). The genres variables are dummy variables. Action (Comedy, Drama, Romance, Thriller) takes the value 1 if the script is classified in the "Action" (Comedy, Drama, Romance, Thriller) category by Spec Screenplay Directory, and 0 otherwise. Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information regarding whether the movies has been produced is from IMDB.

## Price

Scr Number Movies	448.618*** (12.4569)				448.561*** (12.4635)			565.927*** (14.3588)	502.679*** (13.7585)
Scr Reputation Movies		713.975*** (4.5817)		795.673*** (5.0832)		713.663*** (4.5747)			
Scr Nominated Oscar		3,677.747*** (3.4757)				3,819.013*** (3.6010)	4,433.434*** (4.3892)		
Scr Any Nomination	1,505.073*** (3.3005)		2,919.137*** (5.8651)		1,011.407*** (3.5164)				
Transparent Script	1,013.103*** (3.5277)	1,217.529*** (3.8139)			1,010.025*** (3.6625)	1,230.291*** (3.8450)			
Low Rep * Transparent Script								795.281** (2.2702)	
Words Log				-8.471 (1.0627)					
Low Rep * Words Log							-10.816* (1.7450)	27.988*** (4.3381)	
Info Dummy			489.014** (2.1348)						
Low Rep * Info Dummy									578.270** (2.2613)
Action					-356.222 (1.0775)	-289.984 (0.7874)		-391.526 (1.2292)	-386.396 (1.1514)
Comedy					84.535 (0.2342)	179.582 (0.4469)		142.065 (0.4085)	109.362 (0.2986)
Drama					-348.264 (0.8812)	-222.686 (0.5062)		-283.122 (0.7437)	-315.132 (0.7866)
Romance					281.973 (0.9322)	501.239 (1.4871)		312.522 (1.0657)	260.353 (0.8474)
Thriller					426.906 (1.0791)	469.53 (1.0640)		434.126 (1.1370)	416.746 (1.0376)
Other					-518.095 (1.0430)	-312.182 (0.5633)		-446.081 (0.9305)	-533.463 (1.0580)
Manager					-298.581 (0.9883)	-413.324 (1.2284)		-220.137 (0.7556)	-376.226 (1.1952)
Constant	-73.117 (0.6127)	176.095 (1.2279)	375.104*** (2.5873)	558.741** (2.2337)	-48.386 (0.1278)	79.35 (0.1861)	776.775*** (5.0133)	-624.663 (1.5283)	-34.928 (0.0903)
Observations	747	747	747	747	747	747	747	747	747
Adjusted R-squared	0.2856	0.1159	0.0967	0.079	0.2915	0.121	0.0767	0.2874	0.2697

**Table II: General Compensation.**

This table reports OLS estimates of general compensation regressions on a set of variables that measure screenwriter reputation, script complexity, movie genre and agency relationships. The dependent variable, Price, reflects the payment made to the screenwriter when he sells the script. In non-contingent contracts, the screenwriter compensation is fixed (i.e. the screenwriter compensation does not depend on whether the movie is produced or not). In contingent contracts, Price reflects the screenwriter compensation when the movie is not. We include several screenwriter reputation variables. Number Movies measures the number of scripts previously sold by the script's screenwriter. Reputation Movies takes the value 0 if the screenwriter has not previously sold any script; 1 if the screenwriter has previously sold between 1 and 3 scripts; 2 if the screenwriter has previously sold between 4 and 10 scripts; and 3 if the screenwriter has previously sold more than 10 scripts. Nominated Oscar takes the value 1 if the screenwriter has been previously nominated to an Oscar. Any Nomination takes the value 1 if the screenwriter has been previously nominated to an award in the following festivals: Oscars, Golden Globes, British Academy Awards, Emmy Award, European Film Award, Cannes, Sundance, Toronto, Berlin. We also include several variables that try to capture soft information or script complexity. Words Log counts the number of words in the script logline. InfoDummy equals 1 if additional information about the script is available. We create a script complexity index, Transparent Script, that equals 1 when the log line contains less than 20 words (i.e. Soft\_Words equals 0), and additional information about the script is available (i.e. InfoDummy equals 1). The genres and agency variables are dummy variables. Action (Comedy, Drama, Romance, Thriller) takes the value 1 if the script is classified in the "Action" (Comedy, Drama, Romance, Thriller) category by Spec Screenplay Directory, and 0 otherwise. Manager takes the value of 1 if the screenwriter has a manager, and 0 otherwise. We create interaction variables for soft low reputation - soft information. These variables, identified by Low Rep, take the value of the relevant soft information variable if the screenwriter has not previously sold any script, and 0 otherwise. Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information regarding whether the movies has been produced is from IMDB.

## Price - Non Contingent Contract

Scr Number Movies	690.886*** (9.3568)			790.389*** (11.4987)		840.684*** (11.9124)
Scr Reputation Movies		1,327.030*** (3.3647)				
Scr Experienced Writer			1,130.701* (1.8002)			
Scr Nominated Oscar		6,389.574*** (2.7864)			8,379.540*** (3.5707)	
Scr Any Nomination	2,399.208** (2.1716)					
Transparent Script	1,947.201*** (2.7722)	2,905.857*** (3.5384)	3,105.465*** (3.6290)			
Low Rep * Words Log					-33.355* (1.7134)	
Info Dummy				1,099.781** (2.1354)		
Low Rep * Info Dummy						1,387.298** (2.2920)
Low Rep * Soft Genres					953.201 (1.4831)	-797.130* (1.9445)
Action			-864.506 (0.8674)	-1285.903 (1.5973)		-507.576 (0.5021)
Comedy			104.404 (0.0899)	1118.078 (1.1913)		941.209 (0.7986)
Drama			-498.514 (0.3947)	-4.965 (0.0049)		-64.125 (0.0501)
Romance			2,493.916** (2.3474)	1295.004 (1.5066)		2,965.384*** (2.6872)
Thriller			876.294 (0.6994)	1561.609 (1.5405)		1731.885 (1.3648)
Other			-1076.824 (0.6626)	-1125.115 (0.8573)		-240.672 (0.1473)
Manager			-663.485 (0.7195)	-1084.283 (1.3806)		-671.861 (0.7295)
Constant	-220.32 (0.7923)	-2.237 (0.0061)	172.404 (0.1395)	-1051.032 (1.0572)	1,386.904*** (2.7377)	731.18 (0.6030)
Observations	282	282	282	282	282	282
Adjusted R-squared	0.3843	0.1337	0.0682	0.3928	-0.0046	0.0727

**Table III: Compensation in Non Contingent Contracts.**

This table reports OLS estimates of compensation in non contingent contracts (i.e. contracts in which the screenwriter compensation does not depend on whether the movie is produced or not) on a set of variables that measure screenwriter reputation, script complexity, movie genre and agency relationships. The dependent variable, Price\_Cont0, measures the payment that the screenwriter receives in a non-contingent contract. We include several screenwriter reputation variables. Number Movies measures the number of scripts previously sold by the script's screenwriter. Reputation Movies takes the value 0 if the screenwriter has not previously sold any script; 1 if the screenwriter has previously sold between 1 and 3 scripts; 2 if the screenwriter has previously sold between 4 and 10 scripts; and 3 if the screenwriter has previously sold more than 10 scripts. Experienced Writer takes the value zero if the screenwriter has not previously sold any script, and 1 otherwise. Nominated Oscar takes the value 1 if the screenwriter has been previously nominated to an Oscar. Any Nomination takes the value 1 if the screenwriter has been previously nominated to an award in the following festivals: Oscars, Golden Globes, British Academy Awards, Emmy Award, European Film Award, Cannes, Sundance, Toronto, Berlin. We also include several variables that try to capture soft information or script complexity. Words Log counts the number of words in the script logline. InfoDummy equals 1 if additional information about the script is available. We create a script complexity index, Transparent Script, that equals 1 when the log line contains less than 20 words (i.e. Soft\_Words equals 0), and additional information about the script is available (i.e. InfoDummy equals 1). Soft\_Genre equals 1 if the qualified number of genres is greater than 2, and 0 otherwise. The genres and agency variables are dummy variables. Action (Comedy, Drama, Romance, Thriller) takes the value 1 if the script is classified in the "Action" (Comedy, Drama, Romance, Thriller) category by Spec Screenplay Directory, and 0 otherwise. Manager takes the value of 1 if the screenwriter has a manager, and 0 otherwise. We create interaction variables for soft low reputation - soft information. These variables, identified by Low Rep, take the value of the relevant soft information variable if the screenwriter has not previously sold any script, and 0 otherwise. Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information regarding whether the movies has been produced is from IMDB. t-statistics are in parenthesis.

\*, \*\*, \*\*\* indicate significance at the 10, 5 and 1 percent levels.

## Price - Movie Not Made Contingent Contract

Scr Number Movies	32.881*						
	(1.6552)						
Scr Reputation Movies		176.156***	170.986***				
		(5.9712)	(5.8447)				
Low Rep * Log Words				-3.242**			-2.873*
				(2.2411)			(1.9439)
Soft Words					-45.311***		
					(3.1005)		
Low Rep * Soft Words							
Info Dummy		52.264	85.089*			10.56	
		(1.1988)	(1.8866)			(0.1925)	
Low Rep * Soft Genres				-69.993**		-119.700***	-79.462**
				(2.2228)		(4.2469)	(2.4024)
Low Rep * Log Movies					-12.788		
					(0.2040)		
Soft Log Movies	110.534						
	(1.4254)						
Action			102.825			10.516	7.622
			(1.4790)			(0.4270)	(0.3114)
Comedy			-3.224			64.556	39.674
			(0.0438)			(0.8476)	(0.5168)
Drama			-90.397			-33.529	-58.686
			(1.1031)			(0.3946)	(0.6894)
Romance			-31.345			34.754	13.945
			(0.5317)			(0.5654)	(0.2247)
Thriller			-16.449			49.944	13.967
			(0.1998)			(0.5887)	(0.1618)
Other			-24.634			41.851	7.503
			(0.2474)			(0.4078)	(0.0726)
Manager			-171.697***			-159.649**	-149.951**
			(2.7020)			(2.4671)	(2.4073)
Constant	392.893***	334.714***	354.656***	549.772***	480.868***	481.267***	529.214***
	(11.7908)	(11.3939)	(4.5431)	(16.6460)	(17.4110)	(6.1087)	(6.4861)
Observations	465	465	465	465	465	465	465
Adjusted R-squared	0.1722	0.2399	0.2555	0.2142	0.186	0.2218	0.2298

**Table IV: Initial Compensation in Contingent Contracts.**

This table reports OLS estimates of initial compensation in contingent contracts (i.e. contracts in which the screenwriter compensation depends on whether the movie is produced or not) on a set of variables that measure screenwriter reputation, script complexity, movie genre and agency relationships. The dependent variable, Price\_Cont1 measures the initial payment that the screenwriter receives in a contingent contract. If the movie is not produced, the screenwriter does not receive any additional compensation. When the movie is produced, the screenwriter is paid an additional fee. We include several screenwriter reputation variables. Number Movies measures the number of scripts previously sold by the script's screenwriter. Reputation Movies takes the value 0 if the screenwriter has not previously sold any script; 1 if the screenwriter has previously sold between 1 and 3 scripts; 2 if the screenwriter has previously sold between 4 and 10 scripts; and 3 if the screenwriter has previously sold more than 10 scripts. We also include several variables that try to capture soft information or script complexity. Words Log counts the number of words in the script logline. Soft\_Words equals 0 if the script logline contains less than 20 words; 1 if the script logline contains between 21 and 30 words; 2 if the script logline contains between 31 and 40 words; and 3 if the script logline contains more than 40 words. Soft\_Logmovies equals 1 if the script's logline refers to any other movie, and 0 otherwise. InfoDummy equals 1 if additional information about the script is available. Soft\_Genre equals 1 if the qualified number of genres is greater than 2, and 0 otherwise. The genres and agency variables are dummy variables. Action (Comedy, Drama, Romance, Thriller) takes the value 1 if the script is classified in the "Action" (Comedy, Drama, Romance, Thriller) category by Spec Screenplay Directory, and 0 otherwise. AgeManager takes the value of 1 if the screenwriter has a manager, and 0 otherwise. We create interaction variables for soft low reputation - soft information. These variables, identified by Low Rep, take the value of the relevant soft information variable if the screenwriter has not previously sold any script, and 0 otherwise. Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information regarding whether the movies has been produced is from IMDB. t-statistics are in parenthesis.

\*, \*\*, \*\*\* indicate significance at the 10, 5 and 1 percent levels.

### Contingent Contract (Type of Contract)

Scr Number Movies	-0.018*			-0.020*		-0.017	-0.021*
	(1.7338)			(1.8115)		(1.5961)	(1.9050)
Scr Experienced Writer			-0.069		-0.063		
			(0.7372)		(0.6617)		
Transparent Script	-0.009				-0.023		
	(0.0634)				(0.1684)		
Low Rep * Transparent Script						0.209	
						(1.2502)	
Words Log		0.006*					
		(1.7882)					
Soft Words			0.052*				
			(1.6702)				
Log Movies				-0.031			
				(0.2664)			
Low Rep * Info Dummy							-0.095
							(0.8017)
Soft Genres	1.002*	1.017*			0.928*	0.973*	
	(1.8845)	(1.8892)			(1.6848)	(1.8672)	
Action				0.194	0.124		0.202
				(1.2188)	(0.7629)		(1.2695)
Comedy				-0.137	-0.191		-0.13
				(0.7893)	(1.0742)		(0.7472)
Drama				0.022	-0.042		0.026
				(0.1141)	(0.2125)		(0.1371)
Romance				0.282*	0.247*		0.289*
				(1.9065)	(1.6565)		(1.9573)
Thriller				-0.254	-0.313		-0.247
				(1.3332)	(1.6219)		(1.2968)
Other				0.249	0.25		0.257
				(1.0287)	(1.0091)		(1.0601)
Manager				0.061	0.116		0.085
				(0.4425)	(0.8266)		(0.6028)
Constant	0.346***	0.153	0.264***	0.374**	0.417**	0.325***	0.383**
	(6.5605)	(1.5129)	(3.3667)	(2.0603)	(2.1990)	(6.1873)	(2.1061)
Observations	762	762	762	762	762	762	762

**Table V: Type of Contract Offered to the Screenwriter.**

This table reports probit estimates of the type of contract offered to the screenwriter depending on a set of variables that measure screenwriter reputation, script complexity, movie genre and agency relationships. The dependent variable, Cont, is a dummy variable that equals 0 if the screenwriter's contract is fixed; that is, the screenwriter receives a certain salary regardless of whether the movie is produced or not. The variable equals 1 when the contract is structured in two steps: the screenwriter receives a certain amount for selling the script; and additional payment if the movie is actually made. We include several screenwriter reputation variables. Number Movies measures the number of scripts previously sold by the script's screenwriter. Experienced Writer takes the value zero if the screenwriter has not previously sold any script, and 1 otherwise. We also include several variables that try to capture information on script complexity. Words Logline counts the number of words in the script logline. Soft\_Words equals 0 if the script logline contains less than 21 words; 1 if the script logline contains between 21 and 30 words; 2 if the script logline contains between 31 and 40 words; and 3 if the script logline contains more than 40 words. Soft\_Logmovies equals 1 if the script logline refers to any other movie, and 0 otherwise. InfoDummy equals 1 if additional information about the script is available. We create a script complexity index, Transparent Script, that equals 1 when the log line contains less than 20 words (Soft\_Words equals 0), and additional information about the script is available (i.e. InfoDummy equals 1). Soft\_Genre equals 1 if the number of genres is greater than 2, and 0 otherwise. The genres and agency variables are dummy variables. Action (Comedy, Drama, Romance, Thriller) equals 1 if the script is classified in the "Action" category by Spec Screenplay Directory, and 0 otherwise. Manager equals 1 if the screenwriter has a manager, and 0 otherwise. We create interaction variables for soft low reputation - soft information. These variables, identified by Low Rep, take the value of the relevant soft information variable if the screenwriter has not previously sold any script, and 0 otherwise. Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information on whether the movie has been produced is from IMDB. t-statistics are in parenthesis.

\*, \*\*, \*\*\* indicate significance at the 10, 5 and 1 percent levels.

## Produced

Scr Number Movies	0.012*	0.014**				0.015**			
	(1.6801)	(1.9769)				(2.0489)			
Scr Experienced Writer			0.286***						
			(3.4830)						
Scr Nominated Oscar		0.539**		0.627**			0.579**		
		(2.0782)		(2.4647)			-2.2922		
Scr Awarded Oscar								0.800*	
								(1.8929)	
Scr Any Nomination	0.559***								
	(3.3792)								
Scr Any Award					0.573**				0.508**
					(2.3838)				(2.0876)
Low Rep * Log Words								-0.008***	
								(2.9810)	
Low Rep * Soft Words						-0.067**			
						(2.1131)			
Info Dummy			0.143*	0.149*	0.146*				
			(1.7062)	(1.7733)	(1.7355)				
Low Rep * Soft Genres							-0.146***		-0.157***
							(2.7544)		(2.8502)
Action			0.037	0.048	0.059				0.133
			(0.2620)	(0.3423)	(0.4287)				(0.9438)
Comedy			0.12	0.125	0.088				0.184
			(0.7711)	(0.8014)	(0.5664)				(1.1572)
Drama			0.254	0.255	0.229				0.301*
			(1.5473)	(1.5555)	(1.3874)				(1.8127)
Romance			0.056	0.051	0.044				0.12
			(0.4378)	(0.4040)	(0.3469)				(0.9198)
Thriller			-0.008	0.016	-0.007				0.07
			(0.0440)	(0.0928)	(0.0412)				(0.3921)
Other			0.351*	0.365*	0.334				0.417**
			(1.7006)	(1.7764)	(1.6266)				(2.0125)
Manager			-0.333**	-0.330**	-0.337**				-0.288**
			(2.5105)	(2.5104)	(2.5587)				(2.2298)
Constant	-0.821***	-0.803***	-1.071***	-0.966***	-0.935***	-0.733***	-0.665***	-0.660***	-0.858***
	(18.6295)	(18.4657)	(6.3452)	(5.8819)	(5.7136)	(13.9983)	(11.7016)	(12.3844)	(5.2801)
Observations	1190	1190	1190	1190	1190	1190	1190	1190	1190

**Table VI: Probability of Movie Being Produced.**

This table reports probit estimates of the decision to produce the movie or not depending on a set of variables that measure screenwriter reputation, script complexity, movie genre and agency relationships. The dependent variable, Produced, is a dummy variable that takes the value 1 if the script has been produced or is in production, and 0 otherwise. We include several screenwriter reputation variables. Number Movies measures the number of scripts previously sold by the script's screenwriter. Experienced Writer takes the value zero if the screenwriter has not previously sold any script, and 1 otherwise. Nominated Oscar (Awarded Oscar) takes the value 1 if the screenwriter has been previously nominated to (won) an Oscar. Any Nomination (Any Award) takes the value 1 if the screenwriter has been previously nominated (won) to an award in the following festivals: Oscars, Golden Globes, British Academy Awards, Emmy Award, European Film Award, Cannes, Sundance, Toronto, Berlin. We also include several variables that try to capture soft information or script complexity. Words Logline counts the number of words in the script logline. Soft\_Words equals 0 if the script logline contains less than 20 words; 1 if the script logline contains between 21 and 30 words; 2 if the script logline contains between 31 and 40 words; and 3 if the script logline contains more than 40 words. Soft\_Logmovies equals 1 if the scripts logline refers to any other movie, and 0 otherwise. InfoDummy equals 1 if additional information about the script is available. Soft\_Genre equals 1 if the qualified number of genres is greater than 2, and 0 otherwise. The genres and agency variables are dummy variables. Action (Comedy, Drama, Romance, Thriller) takes the value 1 if the script is classified in the "Action" (Comedy, Drama, Romance, Thriller) category by Spec Screenplay Directory, and 0 otherwise. Manager takes the value of 1 if the screenwriter has a manager, and 0 otherwise. We create interaction variables for soft low reputation - soft information. These variables, identified by Low Rep, take the value of the relevant soft information variable if the screenwriter has not previously sold any script, and 0 otherwise. Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information regarding whether the movies has been produced is from IMDB. t-statistics are in parenthesis.

\*, \*\*, \*\*\* indicate significance at the 10, 5 and 1 percent levels.

	PG (N = 12)		PG-13 (N = 62)		R (N = 77)		K-Wallis
	Average	St. Dev.	Average	St. Dev.	Average	St. Dev.	
Negative Costs	35,100	25,604	40,355	26,796	35,074	29,198	0.2312
Dom. Print & Advertising Costs	24,272	11,219	29,724	9,662	24,441	15,406	0.061
Domestic Gross	68,395	93,205	55,412	50,032	33,368	36,634	0.0017
Domestic Rentals	22,096	21,935	32,421	31,934	17,281	19,142	0.0003
Foreign Gross	59,362	123,182	35,385	48,868	28,187	41,711	0.6878
Foreign Rentals	11,813	13,777	20,093	31,645	12,652	19,043	0.4977
Domestic Video Gross	31,009	23,683	30,681	23,419	17,923	14,295	0.0002
Domestic DVD Gross	12,755	16,800	15,010	26,035	6,676	9,041	0.0027
Total Revenues	163,386	222,384	133,822	122,897	82,862	87,670	0.0019
Rate1	5.98	6.42	3.96	3.37	3.14	4.02	0.009
Rate2	3.36	3.95	1.84	1.21	1.48	1.58	0.0117
Positive Reviews	0.44	0.18	0.25	0.21	0.34	0.24	0.0116
Non-Negative Reviews	0.65	0.11	0.70	0.13	0.72	0.13	0.3706
Total Reviews	31.10	11.71	26.04	12.02	24.57	12.15	0.2512
Starmeter	0.08	0.29	0.71	0.89	0.71	0.97	0.0409
Nominated Oscar	1.67	2.50	1.73	2.61	1.99	3.29	0.8453
Awarded Oscar	0.33	0.89	0.55	1.07	0.55	1.01	0.7104
Any Nomination	12.58	14.69	10.66	11.87	7.53	8.52	0.2778
Any Award	4.50	5.25	3.73	4.78	2.43	3.10	0.1798
Dummy Starmeter	0.08	0.29	0.47	0.50	0.45	0.50	0.041
Dummy Nominated Oscar	0.42	0.51	0.58	0.50	0.45	0.50	0.2782
Dummy Awarded Oscar	0.17	0.39	0.26	0.44	0.29	0.45	0.6785
Dummy Any Nomination	0.75	0.45	0.84	0.37	0.74	0.44	0.3658
Dummy Any Award	0.75	0.45	0.74	0.44	0.64	0.48	0.3678

**Table VII: Financial Performance for Different Movie Ratings.**

This table compares movie financials, reviews and cast reputation for our sample of produced scripts for which Baseline FT gathers financial data, based on the movie rating. Total Revenues equals Domestic Gross, Foreign Gross, Domestic Video Gross and Domestic DVD Gross. Rate1 equals Total Revenues Divided by Negative Costs. Rate2 equals Total Revenues Divided by Negative Costs plus Domestic Print and Advertising Costs. For each film we gather Variety Reviews. Each Variety's reviewer grades the movie as positive, negative and mixed. Positive Reviews equals the ratio between positive reviews and total reviews. Non-negative reviews equals the ratio between positive and mixed reviews and total reviews. Total reviews equals the total number of reviews. We gather several measures of cast reputation at the movie level. For each movie, we gather the total number of Oscar and major festival nominations and awards for the entire cast. We then create a set of dummy variables that equal one if any cast member is defined as a star for each star definition. Starmeter measures cast reputation following the opinion of IMDb readers. We classify as a star any actor/actress which in the January prior to the film's release has a starmeter below 150.

	0 (N = 70)		1 (N = 81)		T-test
	Average	St. Dev.	Average	St. Dev.	
Negative Costs	33,149	28,748	40,760	26,835	0.048
Dom. Print & Advertising Costs	25,933	14,994	27,189	11,488	0.2813
Domestic Gross	40,686	44,055	49,197	54,520	0.1502
Domestic Rentals	20,578	22,390	26,775	29,011	0.0753
Foreign Gross	29,752	43,365	36,713	62,296	0.2256
Foreign Rentals	13,182	19,790	17,821	28,580	0.1367
Domestic Video Gross	22,120	20,610	26,206	19,982	0.1119
Domestic DVD Gross	8,751	14,206	12,091	21,966	0.1606
Total Revenues	97,132	100,567	121,643	134,953	0.1079
Rate1	3.86	4.60	3.56	3.54	0.3273
Rate2	1.83	2.16	1.73	1.44	0.3752
Positive Reviews	0.32	0.25	0.31	0.22	0.4497
Non-Negative Reviews	0.71	0.14	0.70	0.13	0.3184
Total Reviews	26.52	12.17	24.90	12.06	0.2193
Starmeter	0.63	0.85	0.69	0.97	0.3379
Nominated Oscar	1.56	2.89	2.11	3.01	0.1261
Awarded Oscar	0.40	0.84	0.64	1.14	0.073
Any Nomination	6.93	9.47	11.20	11.24	0.0067
Any Award	2.46	3.62	3.70	4.40	0.0308
Dummy Starmeter	0.43	0.50	0.43	0.50	0.4827
Dummy Nominated Oscar	0.44	0.50	0.56	0.50	0.0847
Dummy Awarded Oscar	0.24	0.43	0.28	0.45	0.2856
Dummy Any Nomination	0.69	0.47	0.86	0.34	0.004
Dummy Any Award	0.60	0.49	0.77	0.43	0.0143

**Table VIII: Experienced Screenwriter.**

This table compares movie financials, reviews and cast reputation for our sample of produced scripts for which Baseline FT gathers financial data, based on whether the movie's original script was the first one sold by the screenwriter. Total Revenues equals Domestic Gross, Foreign Gross, Domestic Video Gross and Domestic DVD Gross. Rate1 equals Total Revenues Divided by Negative Costs. Rate2 equals Total Revenues Divided by Negative Costs plus Domestic Print and Advertising Costs. For each film we gather Variety Reviews. Each Variety's reviewer grades the movie as positive, negative and mixed. Positive Reviews equals the ratio between positive reviews and total reviews. Non-negative reviews equals the ratio between positive and mixed reviews and total reviews. Total reviews equals the total number of reviews. We gather several measures of cast reputation at the movie level. For each movie, we gather the total number of Oscar and major festival nominations and awards for the entire cast. We then create a set of dummy variables that equal one if any cast member is defined as a star for each star definition. Starmeter measures cast reputation following the opinion of IMDb readers. We classify as a star any actor/actress which in the January prior to the film's release has a starmeter below 150.



	All Sample		Non Contingent Cont		Contingent Contract						
					Price		Price If Made		Ratio		
Price - All Sample	3.337*** (3.6933)	3.388*** (3.8342)									
Price - Cont 0			2.994*** (4.2050)	2.793*** (3.6754)							
Price - Cont 1					0.663 (0.0228)	4.814 (0.1586)					
Priceifmade - Cont 1							-12.652 (0.8633)	-12.036 (0.8228)			
Ratio - Cont 1									-15,393.15 (0.9182)	-15,676.04 (0.9560)	
Ln Budget 1	13,966.915** (2.3617)		15,109.056* (2.0527)	16,795.692* (1.8792)		18589.643 (1.5526)					
Ln Budget 2		19,426.760*** (2.9979)			28,156.673** (2.0831)		32,867.405** (2.6048)	27,356.245** (2.2936)	24,473.300* (1.9031)	28,295.246** (2.1851)	
PG	41,753.265** (2.0211)	42,304.349** (2.0829)	-7477.374 (0.2420)	-12161.002 (0.4145)	53,176.135* (1.7449)	54,810.807* (1.7213)	53,281.379* (1.7595)	64,326.185** (2.2394)	57,186.550* (1.8959)	66,180.328** (2.2181)	
PG-13	4,781.45 (0.4574)	7,888.25 (0.7386)	12,683.19 (1.0017)	17,309.31 (1.2748)	7625.118 (0.4866)	7,399.83 (0.4539)	4004.122 (0.2557)	-6466.789 (0.4259)	6,382.20 (0.3939)	10,148.62 (0.6392)	
Positive Reviews				1831.454 (0.0581)	40235.47 (0.8574)	28,257.46 (0.5744)	33432.884 (0.7433)				
NonNegative Reviews	-54346.405 (1.2851)	-49976.537 (1.2374)	-60584.374 (1.1820)					-35,523.65 (0.5607)	-5194.099 (0.0790)	-14733.984 (0.2290)	
Total Reviews	647.708 (1.4056)	706.675 (1.5687)	856.179 (1.4306)	961.779 (1.6003)	771.01 (1.0475)	694.406 (0.8968)	676.296 (0.9032)	802.172 (1.1774)	786.794 (1.1769)	869.76 (1.3189)	
Seasonal	59,553.335*** (3.0302)	56,467.549*** (2.9432)	63,213.818* (2.0464)	69,975.038** (2.2656)	49,691.718* (1.7658)	63,803.275** (2.2680)	42992.271 (1.5758)	41,851.28 (1.4690)	47,874.68 (1.6391)	45,723.72 (1.5922)	
Cast Nominated Oscar	-3789.597 (1.3053)	-553.363 (0.2557)		2,749.55 (0.9418)	-1526.74 (0.5380)	-2949.846 (1.1190)		-6294.686 (1.6055)	-2260.054 (0.6881)	-1912.779 (0.7138)	
Cast Awarded Oscar	6453.782 (0.7563)							14496.004 (1.2287)			
Cast Any Nomination			-107.37 (0.1419)					256.095 (0.4042)			
Cast Dummy Nominated Oscar		-12892.875 (1.0145)			-21544.978 (1.1854)						
Cast Dummy Awarded Oscar									-11285.908 (0.4969)		
Cast Dummy Any Nomination				-11998.127 (0.5498)		-16,647.75 (0.7712)	-22871.235 (1.1229)				
Cast Dummy Any Award			3513.298 (0.1893)							-25775.353 (1.4042)	
Constant	-121,328.993* (1.6939)	-189,063.017** (2.4394)	-138287.717 (1.7103)	02,465.069** (2.2973)	-319,916.301** (2.2965)	-207,810.193* (1.8177)	-346,809.607** (2.6387)	264,125.278* (1.8668)	-239286.055 (1.5062)	-263,888.378* (1.6796)	
Observations	88	88	34	34	54	54	55	55	56	56	
Adjusted R-squared	0.3637	0.3888	0.6197	0.6124	0.2532	0.1934	0.2356	0.246	0.1896	0.2188	

**Table IX: Domestic Gross**

This table reports the OLS estimates of the regression of domestic gross revenues on screenwriter compensation, and a set of control variables that includes movie reviews and cast reputation. The first two columns report estimates for the for our sample of produced scripts for which Baseline FT gathers financial data. Columns three and four are restricted to scripts in which a non-contingent contract is offered to the screenwriter. Columns five to ten look at the relationship between movie financials and screenwriter compensation in contingent contracts. In columns five and six the compensation measure used is the initial payment made to the screenwriter. In columns seven and eight, we use the compensation the screenwriter receives when the script is made. Finally, columns nine and ten look at the ratio between the compensation when the movie is made and the compensation when the movie is not made. Budget1 equals Negative Costs. Budget2 Negative Costs plus Domestic Print and Advertising Costs. For each film we gather Variety Reviews. Each Variety's reviewer grades the movie as positive, negative and mixed. Positive Reviews equals the ratio between positive reviews and total reviews. Non-negative reviews equals the ratio between positive and mixed reviews and total reviews. Total reviews equals the total number of reviews. We gather several measures of cast reputation at the movie level. For each movie, we gather the total number of Oscar and major festival nominations and awards for the entire cast. We then create a set of dummy variables that equal one if any cast member is defined as a star for each star definition. Starmeter measures cast reputation following the opinion of IMDb readers. We classify as a star any actor/actress which in the january prior to the film's release has a starmeter below 150.

	All Sample		Non Contingent Cont		Contingent Contract					
					Price	Price If Made		Ratio		
Price - All Sample	9.917*** (4.7122)	9.280*** (4.2317)								
Price - Cont 0			8.394*** (3.8560)	8.998*** (4.9192)						
Price - Cont 1					31.346 (0.4467)	12.524 (0.1826)				
Priceifmade - Cont 1							-17.567 (0.5127)	-16.779 (0.5014)		
Ratio - Cont 1									-33224.04 (0.8992)	-26258.354 (0.7075)
Ln Budget 1	43,982.055*** (3.1926)	51,371.121*** (3.4663)	49,045.525** (2.7969)	45,922.332*** (2.8571)	45,884.692* (1.6803)					
Ln Budget 2						71,682.144** (2.3083)	72,507.298** (2.5465)	75,534.527*** (2.7497)	64,591.950** (2.2698)	72,274.662** (2.4874)
PG	98,971.650** (2.0567)	88,183.557* (1.6743)	-49253.239 (0.5801)	-26455.874 (0.3681)	134,113.167* (1.8584)	138,400.153* (2.0040)	148,771.316** (2.1423)	149,110.031** (2.2954)	144,419.105** (2.1776)	162,511.632** (2.4565)
PG-13	9,033.75 (0.3710)	21,955.10 (0.8680)	39970.828 (1.1230)	18675.763 (0.4936)	7,839.39 (0.2094)	-5,679.39 (0.1593)	-5,566.41 (0.1592)	1,237.46 (0.0353)	3818.406 (0.1106)	17320.653 (0.4892)
Positive Reviews		75789.372 (1.1211)	44480.321 (0.5384)		104,972.67 (0.9452)					
NonNegative Reviews	-154677.985 (1.5702)			-192170.748 (1.5281)		-107,436.59 (0.7426)	-101,642.95 (0.6871)	-103,193.21 (0.7272)	-60174.819 (0.4155)	-122885.761 (0.8280)
Total Reviews	971.579 (0.9051)	951.706 (0.8366)	1952.615 (1.2821)	1483.856 (1.0293)	15.264 (0.0087)	605.031 (0.3769)	971.624 (0.6001)	1497.645 (0.9618)	1167.331 (0.7885)	1082.339 (0.7161)
Seasonal	137,233.299*** (2.9977)	145,005.896*** (3.1583)	159,134.106** (2.2857)	155,735.150** (2.3580)	139,863.363** (2.1653)	117,742.189* (1.7999)	104565.124 (1.5336)	104811.509 (1.6535)	101254.998 (1.5650)	80295.845 (1.2690)
Cast Nominated Oscar	-9175.091 (1.3567)		-4515.818 (0.4028)	-7194.782 (0.6850)				-5,242.13 (0.9226)	-8330.815 (1.4815)	
Cast Awarded Oscar	6,522.86 (0.3281)	-15056.208 (0.9481)	16592.288 (0.3790)				-4597.278 (0.2221)			
Cast Any Nomination		-797.712 (0.5881)			4456.817 (1.0416)	-135.43 (0.0880)	-328.608 (0.1852)			-328.96 (0.2133)
Cast Any Award					-14,190.42 (1.3137)					
Cast Dummy Starmeter							-38451.851 (0.9824)			
Cast Dummy Nominated Oscar				34232.866 (0.6673)						
Cast Dummy Any Nomination								-40254.341 (0.8878)		-72282.126 (1.5918)
Cast Dummy Any Award										
Constant	-355,120.490** (2.1285)	-569,414.653*** (3.7665)	-581,631.457*** (3.0998)	-377,999.241* (2.0206)	-509,017.467* (1.9353)	-690,973.203* (1.9438)	-689,912.274** (2.0596)	-704,771.729** (2.2245)	-580079.728 (1.6503)	-580499.633 (1.6141)
Observations	88	88	34	34	54	54	55	55	56	56
Adjusted R-squared	0.4207	0.4065	0.6299	0.6628	0.1942	0.2317	0.2223	0.2567	0.2376	0.2396

**Table X: Total Revenues**

This table reports the OLS estimates of the regression of total revenues on screenwriter compensation, and a set of control variables that includes movie reviews and cast reputation. Total Revenues equals Domestic Gross, Foreign Gross, Domestic Video Gross and Domestic DVD Gross. The first two columns report estimates for the for our sample of produced scripts for which Baseline FT gathers financial data. Columns three and four are restricted to scripts in which a non-contingent contract is offered to the screenwriter. Columns five to ten look at the relationship between movie financials and screenwriter compensation in contingent contracts. In columns five and six the compensation measure used is the initial payment made to the screenwriter. In columns seven and eight, we use the compensation the screenwriter receives when the script is made. Finally, columns nine and ten look at the ratio between the compensation when the movie is made and the compensation when the movie is not made. Budget1 equals Negative Costs. Budget2 Negative Costs plus Domestic Print and Advertising Costs. For each film we gather Variety Reviews. Each Variety's reviewer grades the movie as positive, negative and mixed. Positive Reviews equals the ratio between positive reviews and total reviews. Non-negative reviews equals the ratio between positive and mixed reviews and total reviews. Total reviews equals the total number of reviews. We gather several measures of cast reputation at the movie level. For each movie, we gather the total number of Oscar and major festival nominations and awards for the entire cast. We then create a set of dummy variables that equal one if any cast member is defined as a star for each star definition. Starmeter measures cast reputation following the opinion of IMDb readers. We classify as a star any actor/actress which in the January prior to the film's release has a starmeter below 150.

	All Sample		Non Contingent Cont		Contingent Contract				Ratio	
					Price		Price If Made			
Price - All Sample	0.001*** (3.2465)	0.001*** (3.6836)								
Price - Cont 0			0.001*** (2.5440)	0.001*** (3.7977)						
Price - Cont 1					0 (0.3181)	0 (0.1766)				
Priceifmade - Cont 1							0 (0.5451)	0 (0.6452)		
Ratio - Cont 1									-0.646 (1.4217)	-0.508 (1.0983)
Ln Budget 1	-0.004 (0.0230)			0.012 (0.0618)					-0.162 (0.5052)	
Ln Budget 2		0.032 (0.1728)	0.052 (0.2465)		0.178 (0.4695)	0.279 (0.7307)	0.354 (0.9935)	0.298 (0.8242)		0.074 (0.2034)
PG	1.386** (2.2426)	1.572*** (2.7100)	0.048 (0.0579)	0.068 (0.0824)	1.942** (2.2684)	1.940** (2.2325)	2.183** (2.5527)	2.449*** (2.9915)	1.701* (1.9423)	2.299*** (2.6947)
PG-13	0.26 (0.8627)	0.20 (0.6644)	0.65 (1.6101)	0.393 (1.1307)	0.18 (0.4182)	0.16 (0.3525)	0.16 (0.3670)	0.06 (0.1388)	0.241 (0.5386)	0.079 (0.1802)
Positive Reviews	1.054 (1.3192)		0.462 (0.5364)		1.53 (1.1568)	1.46 (1.0767)	0.97 (0.7650)		1.73 (1.3380)	
NonNegative Reviews		-1.2 (1.0403)		-1.335 (0.9635)				-0.934 (0.5231)		-0.091 (0.0497)
Total Reviews	0.012 (0.8834)	0.014 (1.0999)	0.021 (1.2834)	0.021 (1.2700)	0.009 (0.4502)	0.01 (0.4018)	0.013 (0.6107)	0.014 (0.7278)	0.004 (0.2017)	0.016 (0.8162)
Seasonal	1.582*** (2.9747)	1.457*** (2.6778)	1.968** (2.7429)	1.681* (2.0406)	1.278 (1.6162)	1.33 (1.6764)	1.097 (1.4235)	1.202 (1.5422)	1.304 (1.6735)	1.222 (1.4972)
Cast Nominated Oscar	-0.08 (1.1293)	-0.054 (0.8766)			-0.064 (0.8020)	-0.10 (1.3814)			-0.144 (1.2790)	-0.079 (0.8229)
Cast Awarded Oscar									0.047 (0.1405)	
Cast Any Nomination							-0.011 (0.5955)	-0.008 (0.4049)		
Cast Any Award	-0.027 (0.5874)		-0.125 (1.5450)	-0.099 (1.3674)						-0.037 (0.5897)
Cast Dummy Nominated Oscar		-0.425 (1.1701)			-0.729 (1.4284)					
Cast Dummy Awarded Oscar			0.661 (1.0139)							
Cast Dummy Any Nomination						-0.66 (1.1283)	-0.798 (1.3883)			
Cast Dummy Any Award				0.321 (0.6042)				-0.639 (1.1704)		
Constant	-0.216 (0.1211)	0.665 (0.3005)	-1.266 (0.5486)	0.463 (0.2100)	-1.824 (0.4662)	-2.673 (0.6858)	-3.00 (0.8073)	-1.729 (0.4152)	2.993 (0.8208)	0.595 (0.1319)
Observations	89	89	35	35	54	54	55	55.00	56	56
Adjusted R-squared	(0.2866)	(0.2832)	(0.5024)	(0.5036)	(0.2245)	(0.2113)	(0.1927)	(0.1679)	(0.1956)	(0.1525)

**Table XI: Rate of Return.**

This table reports the OLS estimates of the regression of the films rate of return on screenwriter compensation, and a set of control variables that includes movie reviews and cast reputation. Rate of return is defined as the ratio between total revenues and negative costs plus print and advertisements costs. The first two columns report estimates for the for our sample of produced scripts for which Baseline FT gathers financial data. Columns three and four are restricted to scripts in which a non-contingent contract is offered to the screenwriter. Columns five to ten look at the relationship between movie financials and screenwriter compensation in contingent contracts. In columns five and six the compensation measure used is the initial payment made to the screenwriter. In columns seven and eight, we use the compensation the screenwriter receives when the script is made. Finally, columns nine and ten look at the ratio between the compensation when the movie is made and the compensation when the movie is not made. Budget1 equals Negative Costs. Budget2 Negative Costs plus Domestic Print and Advertising Costs. For each film we gather Variety Reviews. Each Variety's reviewer grades the movie as positive, negative and mixed. Positive Reviews equals the ratio between positive reviews and total reviews. Non-negative reviews equals the ratio between positive and mixed reviews and total reviews. Total reviews equals the total number of reviews. We gather several measures of cast reputation at the movie level. For each movie, we gather the total number of Oscar and major festival nominations and awards for the entire cast. We then create a set of dummy variables that equal one if any cast member is defined as a star for each star definition. Starmeter measures cast reputation following the opinion of IMDb readers. We classify as a star any actor/actress which in the January prior to the film's release has a starmeter below 150.

## Price

Domestic Gross	0.025*** (3,1442)								
Foreign Gross		0.017** (2,2983)	0.024*** (2,9031)						
Domestic Video Gross				0.040* (1,6712)					
Total Revenues					0.012*** (3,5701)				
Rate of Return 1						201.950* (1,8128)	217.856* (1,6894)		
Rate of Return 2								941.253*** (3,2199)	975.711*** (2,8248)
Experienced Writer									
Number Movies				385.289** (2,1125)					351.962** (2,0273)
Reputation Movies									
Nominated Oscar		6,599.978*** (3,8844)			6,108.459*** (3,7292)	7,098.516*** (4,2276)			
Any Nomination	4,572.046*** (3,3497)		4,800.311*** (3,0801)				5,707.279*** (3,6529)	4,670.881*** (3,4538)	
Transparent Script	10,625.555*** (4,8086)	10,768.470*** (4,9024)			9,865.486*** (4,6272)	11,266.609*** (5,1583)		11,321.133*** (5,2348)	
Soft Words				-761.171** (1,9865)			-630.717* (1,7559)		-659.396* (1,8278)
Info Dummy			2,304.799* (1,8943)						
Constant	-956.605 (1,5809)	-280.089 (0,5317)	-663.674 (0,9998)	874,402 (0,7959)	-1,001.528* (1,7512)	-390.73 (0,6518)	1,085.05 (1,0731)	-1,295.639* (1,9416)	221,183 (0,2086)
Observations	96	95	95	95	96	97	97	97	97
Adjusted Rsquared	(0,3614)	(0,3676)	(0,1830)	(0,0904)	(0,4127)	(0,3545)	(0,1443)	(0,3641)	(0,1359)

**Table XII: Screenwriter Compensation and Future Financial Performance.**

This table reports OLS estimates of general compensation regressions on a set of variables that measure screenwriter reputation, script complexity, and different measures of films financial performance. The dependent variable, Price, reflects the payment made to the screenwriter when he sells the script. In non-contingent contracts, the screenwriter compensation is fixed (i.e. the screenwriter compensation does not depend on whether the movie is produced or not). In contingent contracts, Price reflects the screenwriter compensation when the movie is not produced. We include several screenwriter reputation variables. Number Movies measures the number of scripts previously sold by the script's screenwriter. Reputation Movies takes the value 0 if the screenwriter has not previously sold any script; 1 if the screenwriter has previously sold between 1 and 3 scripts; 2 if the screenwriter has previously sold between 4 and 10 scripts; and 3 if the screenwriter has previously sold more than 10 scripts. Experienced Writer takes the value zero if the screenwriter has not previously sold any script, and 1 otherwise. Nominated Oscar takes the value 1 if the screenwriter has been previously nominated to an Oscar. Any Nomination takes the value 1 if the screenwriter has been previously nominated to an award in the following festivals: Oscars, Golden Globes, British Academy Awards, Emmy Award, European Film Award, Cannes, Sundance, Toronto, Berlin. We also include several variables that try to capture soft information or script complexity. Soft\_Words equals 0 if the script logline contains less than 20 words; 1 if the script logline contains between 21 and 30 words; 2 if the script logline contains between 31 and 40 words; and 3 if the script logline contains more than 40 words. InfoDummy equals 1 if additional information about the script is available. We create a script complexity index, Transparent Script, that equals 1 when the log line contains less than 20 words (i.e. Soft\_Words equals 0), and additional information about the script is available (i.e. InfoDummy equals 1). Compensation, soft information and type of contract data are from the Spec Screenplay Sales Directory. Reputation variables and information regarding whether the movies has been produced is from IMDB. We obtain movie financials from Baseline.