

Subscription Revenue Models as Financing Models

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Abstract

I explore the financial implications of recurring revenue models through a particular channel documented in recent literature: subscriber inattention and inertia. I propose that quasi-liability-like inflows of subscriptions, amplified by these documented subscriber behavioral biases, have first-order effects on capital structure and firm value by allowing firms to hold less precautionary cash than they otherwise would. Event studies around two FTC actions—the 2023-2024 “Click-to-Cancel” rule, and the FTC’s 2024 lawsuit against Adobe—reveal large negative cumulative abnormal returns to subscription firms, particularly those most associated with cancellation frictions, representing about 2% of firm value. Using a newly constructed panel dataset identifying “subscription economy” firms based on 10-K keyword frequency from 2002–2023, I show that, controlling for firm characteristics, time fixed effects and industry fixed effects, recurring revenue-exposed firms are associated with 2.2% lower cash-to-assets and 5.6% higher investment. These results are not explained by cash flow volatility, and provide suggestive evidence that the choice of adopting a subscription revenue model may function not only as pricing strategy, but as a shadow financing mechanism.

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1 Introduction

1.1 The Rise of the Subscription and (In)Attention Economies

The subscription economy has proliferated in recent years. A Bango research estimate found that the average American spends \$924 on recurring subscriptions every year; a 2024 Juniper Research Estimate projected that the subscription economy will be worth almost \$1 trillion globally by 2028; in 2022, Zuora found that its Subscription Economy Index had grown 4.6x faster than the S&P 500 in the past decade¹; and, in my own firm-level sample, I find that nearly half of all firm 10-K's mention recurring revenue-related keywords in 2023, while only 1 firm in my sample did so in 1998. Furthermore, I find that the increase in the percentage share of firms in my sample with subscription-related keywords is largely monotonic. (See Figure 1).

One curious aspect of this meteoric rise is that subscriptions are, in fact, quite old. According to a *Forbes* article², “in the UK, individuals were able to subscribe to deliveries from milkmen as long ago as the 1860s, while magazine subscriptions began in the late 1800s.” Since the simple choice to sell subscriptions rather than in spot markets could, in principle, have been applied by any firm, at any point, throughout most of commercial history, the explosion of the subscription economy in recent decades is almost certainly, at least in large part, the result of technological development. There are a few reasons why firms in conducive industries might prefer to adopt subscription revenue over spot revenue models if technology makes it relatively frictionless to do so. One obvious reason is that a recurring revenue model, all else equal, would smooth out revenue, or at least make it more predictable. Another potential channel is platform economics: recurring users create a data collection externality that allows improved targeting and reduced advertising spend (e.g., Netflix or Spotify’s recommendation algorithms), creating a positive flywheel effect for

¹https://www.zuora.com/wp-content/uploads/2022/09/Zuora_SEI2022_BX-99-Update_tOS_EI2022.pdf

²*Forbes*: “The Origin of the Subscription Model”

firms³. These mechanisms are consistent with complete rational attention on both the firm’s part and the consumer’s.

Another compelling hypothesis, however, drops the rational attention assumption on the consumer side, and suggests that subscribers are often either inattentive or inertial: they forget about their subscriptions, don’t feel like going through the effort to cancel them, or think they’ll use them more than they do. For example, in a recent paper, Einav et al. (2025), studying credit card data, consider both inattention and “switching costs” as relevant forms of behavioral inertia inconsistent with a rational attentive benchmark, and find that “relative to a counterfactual in which consumers are fully attentive, inattention [to unwanted subscriptions] raises seller revenues by between 14% and more than 200%”. This result, if true, implies a recurring rent from customer to firm, constituting effectively an unearned increase in revenue based on customer error rather than genuine provision of economic value. In effect, these customers passively subsidize some of the firm’s operations⁴.

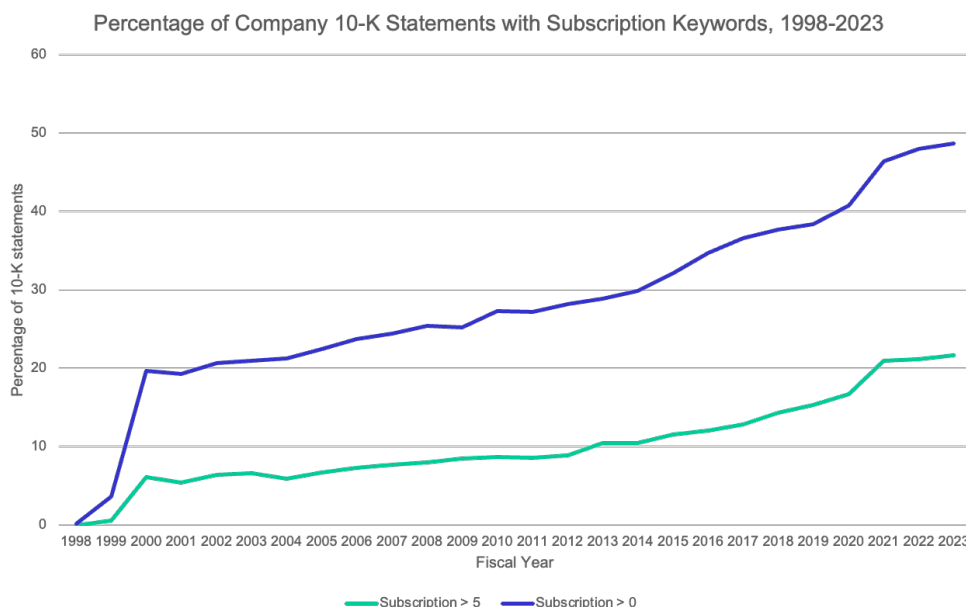


Figure 1: Percentage of Company 10-K Statements with Subscription Keywords, 1998-2023

This paper takes that research to its next logical step, and is the first, to my knowledge,

³I study this channel in a follow-up paper.

⁴As well as, in practice, some of the higher volume and perhaps unprofitable subscribers

to study the *financial* implications of the subscription economy. While I plan to explore other unique features of the subscription economy which have financing implications in subsequent research, in this paper I focus on the documented behavioral channel. In particular, I hypothesize that inattention, inertia, and other documented behavioral frictions, in concert with the recurring nature of subscriptions, create a predictable 'behavioral rent' for the firm, decoupled from actual service usage costs, that has first-order implications for market valuation, investment, and corporate finance. In short, I propose that subscription revenue models are also, in part, financing models⁵.

1.2 Preview of Results

First, in order to isolate market-implied valuation effects from “behavioral” frictions, I exploit two separate FTC actions from 2023-2024: (1) the FTC’s “Click to Cancel” revision to its “negative option rule”, which essentially mandates that subscription firms make it as easy to cancel a subscription as it was to sign up in the first place; and 2) the FTC’s lawsuit of Adobe for allegedly employing deceptive subscription practices. Event study results suggest that, across my entire sample of subscription firms in 2023, the market attributed roughly 2% of firm value to the behaviorally oriented practices targeted by these actions, with evidence of heterogenous effects across industries mapping to the saliency of cancellation frictions in those industries (newspapers being a high friction example, streaming services being a low friction example).

Second, I find that there are real economic / corporate finance shifts associated with subscription models which, roughly speaking, shift the balance sheet from “short-term” orientation to “longer-term” orientation, consistent with the valuation effects I find. I propose this is in part due to a reduced perceived need to hold precautionary cash, owing to the

⁵The word *subscribe* comes from the Latin *sub*, meaning under, and *scribere*, meaning write. Therefore a literal Anglicized translation of *subscribe* would be *underwrite*, a word regularly used in a financing context. In fact, for some of the first joint-stock companies, such as the 1696 Company of Scotland’s Darien Scheme, what we’d now normally call “investments” were called “subscriptions”, and the list of what we’d now call “shareholders” was taken in a “subscription book”. See <https://www.nls.uk/exhibitions/scotland-and-darien/company-of-scotland-subscribers/> or <https://www.clan-forbes.org/post/darien-scheme>

at least tacit expectation of predictable behavioral rents. I find that, controlling for firm-level characteristics, and industry/time fixed effects, from 2002-2023 subscription models are associated with a 2.21% lower cash-to-assets (mean of sample is about 20%) and a 5.62% increase in investment. I also find statistically and economically significant reductions in inventory-to-assets and RD adjusted cash flow, and increases in net leverage, RD and CapEx. These results are robust to sub-sample periods selection and inclusivity of my “subscription” dummy variable measure.

Lastly, since these results are consistent with what has also been documented in empirical relationships between cash flow volatility and investment (e.g., Minton and Schrand 1998), I test to see if my subscription economy variable is simply capturing a reduction in cash flow riskiness. I rule out this explanation, however, by showing that cash flow volatility is uncorrelated with my subscription dummy variable, and that including it as a separate control variable has only minor effects on my core results.

The remainder of the paper proceeds as follows. In the rest of this section, I discuss the “theory” behind subscription models as financing models leading to the specific hypotheses I test. Section 2 is a brief literature review. Section 3 discusses the construction of my subscription firm sample and presents some stylized corporate finance facts about subscription firms. Section 4 reports FTC regulatory event study results, testing market-implied value of inattention frictions. Section 5 provides cross-sectional firm-level panel evidence on investment, cash holdings, and financing behavior in order to test the specific predictions of the following theory section. Section 6 concludes.

1.3 Theoretical Framing

In microeconomic terms, a subscription is simply a repeated two-part tariff.⁶ In a pure subscription, like Netflix, the marginal cost portion of the two-part tariff is zero, and consumers are, once subscribed, constrained only by opportunity cost of time. In the world of atoms, a

⁶A two-part tariff is a pricing strategy where consumers pay a fixed fee upfront—the first part—plus a per-unit charge for each unit of a good or service consumed—the second part.

gym membership works similarly. A model like Costco’s membership fees (which, in 2023, generated revenue equal to 72% of its total income of \$6.3 billion)⁷, or, in the digital realm, Amazon Prime uses the fixed cost portion of the tariff to lower, but not reduce to zero, the marginal cost portion. Both are subscription revenue models, because both rely on some recurring fixed component. It is this recurring fixed component that I conjecture is, at least in part, a shadow financing tool for firms. (See Figure 2).

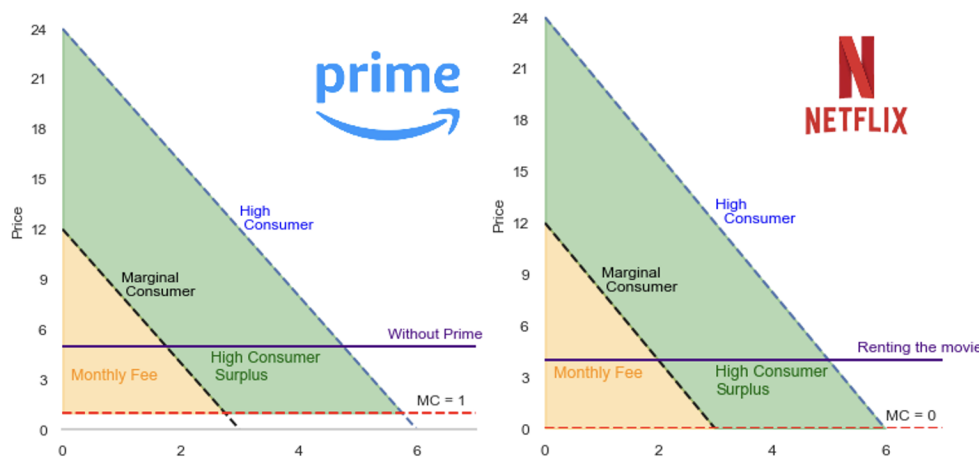


Figure 2: Stylized Graphical Representation of Two-Part Tariffs

Economists have accepted since at least Myers and Majluf (1984) that, if internal capital markets represent a firm’s preferred source of financing, then all revenue models are, in principle, at least partly financing models. One possible reason that revenue models are not frequently studied as such may be they tend to be relatively idiosyncratic and thus difficult to stratify and study as *classes* in any meaningful way. A related reason is that industry-related fixed effects can normally capture revenue model similarities within industries when competitors largely employ similar types of models.

Recurring revenue models, however, are different: they are general enough to be adopted in their core microeconomic feature (repeated two-part tariff) across many industries, but specific enough that there is still some within-industry variation of firms who sell subscrip-

⁷<https://www.retailbrew.com/stories/2024/03/27/costco-says-there-s-no-formula-for-membership-costs-but-prices-will-rise>

tions versus those who sell exclusively on spot. In terms of affecting firm value, the inattention / inertia mechanism, in particular, would seem to be more industry agnostic than other potential mechanisms (e.g. data collection for recommendation algorithms, a la Netflix or Spotify; allowance for non-commutative purchases⁸ a la Amazon Prime).

In particular, I consider two invariant features of all recurring two-part tariffs with first-order importance to corporate finance (I consider “firm value” as the effective outcome variable of all of these components): 1) a liability is created in exchange for cash at the start of a subscription period; 2) smaller, more frequent, smoother revenue streams relative to selling the spot or license equivalent of the same product or bundle of products. Additionally, I consider a third documented empirical fact, which I argue is particularly facilitated by features 1 and 2: 3) the aforementioned behavioral rents from inattention or inertia.

1) Liability-like structure: One key difference between selling a subscription and selling on spot is in accounting: subscriptions create liabilities that spot markets, in general, do not. To illustrate, suppose Netflix sold each of its films on the spot market (like Amazon does for films not included with Prime) instead of offering a subscription bundle. The journal entry for this transaction would debit cash (or accounts receivable) and credit revenue. When customers pay in advance for a subscription period, on the other hand, the firm’s journal entry credits deferred (unearned) revenue, a liability. As a result, until and unless customers use the product or service their subscription gives them access to, up to the point where their marginal benefit of consumption exceeds the marginal cost of that subscription period, they are effectively financing the companies they are subscribed to. This is financially equivalent to an interest-free loan to the company until the good or service is delivered, if ever. Subscription revenue models therefore create a kind of “float” before the corresponding revenue is recognized. This fact alone makes a subscription revenue model quite literally, in part, a financing model, with customers effectively partly financing the company’s operations month-to-month, or year-to-year, or whatever the subscription period may be, until which

⁸To paraphrase Rory Sutherland’s words in his book *Alchemy*, non-communative purchases refer to 100 people buying 1 thing versus 1 person buying 100 things

time they’ve consumed up to (or beyond) the expected allowance. This is most obvious for a “pure” subscription like Netflix or Adobe, but the same logic holds when one isolates the fixed-part of a recurring two-part tariff for, e.g., Amazon Prime or Costco.

2) Smaller, more frequent, smoother revenue streams:

All else equal, risk-averse managers may like a reduced second moment of revenue. In reality, all else is not exactly equal; in particular, in the early stages of a subscription revenue model, the firm may actually receive *less* revenue immediately than they would selling the same number of products on spot. Adobe is the textbook example of this. From a 2018 Forbes article title *How to Dominate the Subscription Economy*⁹: “...lower-priced products designed for a subscription-based service meant that Adobe would initially see a dip in revenue before it saw growth. Revenue shrank in 2013 by 8% and was flat the following year. Adobe even faced some resistance from customers who didn’t initially see the value a subscription model would bring...”. This said, the predictability of the revenues is likely of-first order importance to firms adopting a subscription model. In their FY-2013 10-K statement, for instance, Adobe wrote in unambiguous terms that the switch to the subscription model was “designed to increase the number of customers who purchase our products and services and create a recurring revenue stream that is more predictable.”

Whether the “extensive margin” of net present revenue increases or decreases by offering a subscription revenue model instead of a spot revenue model is ultimately a behavioral and operations question. To this end, however, one reason Adobe cites for their switch to a subscription model in the same FY13 10-K is the “attractive monthly pricing” they’d be able to offer creative cloud at, which they forecasted would be a “catalyst for revenue growth in the coming years”. Implicit in Adobe’s logic was yet another behavioral trait that subscription revenue can exploit: anchoring bias. People may be more willing to pay \$10 twelve times, for example, than \$120 once, anchoring on the smaller periodic price and underestimating the accumulated cost. Users might pay relatively little attention to small increases (say, a \$1

⁹<https://www.bloomberg.com/news/articles/2017-06-08/how-adobe-got-its-customers-hooked-on-subscriptions>

a month hike), generating less churn than purely “rational” microeconomics would predict, particularly if they are already somewhat stuck to the platform (e.g., do I really want to leave Spotify, which has learned my music taste over several years, over a \$1 subscription price change?) Even when data collection externalities are not a confounding factor, as SMU marketing professor Wayne Taylor put it in a RetailBrew article regarding Costco, when it was discussing raising membership fees: “What are you going to do, cancel your Costco membership because it’s another \$5 a year?”¹⁰ While this could perhaps be tested empirically in different research, it seems reasonable to assume that few people would answer this question in the affirmative.

The combination of both of these elements, lubricated by technological advances in platform management, data collection and automatic payment systems, facilitate:

3) A “Behavioral Rent”:

Point 1 (the liability-like structure) means that consumers do not know exactly how much of the second part of the two-part tariff they are going to consume. Some will consume more than the “breakeven” amount for the firm (e.g. somebody who binge watches Netflix at some point every month), but many under-consume relative to the ‘breakeven’ amount of consumption, and some do not consume at all, whether due to inattention or some other friction. Point 2 (the smallness of the recurring cash flows) facilitates point 1: \$10 per month for a year is harder to notice than a \$120 spot payment. Combined, the empirical evidence from, e.g., DellaVigna and Malmendier (2006), Einav et al. (2025) and Sheil et al. (2023) make sense; and, if those results are correct, then rents from inattentive or inertial consumers should constitute a large enough portion of recurring revenues across a broad class of industries to have real effects on firm value. If firms account for some relatively predictable “inattention” cash flow, they can think of it as bolting a small “annuity” (more precisely, a rent) onto the firm’s cash stream: same customers, just slower to churn, like an accounting converse of an “allowances for doubtful accounts”. This leads to a few concrete

¹⁰<https://www.retailbrew.com/stories/2024/03/27/costco-says-there-s-no-formula-for-membership-costs-but-prices-will-rise>

predictions. In the next sub-section, I discuss these predictions, which I empirically test in Sections 4 and 5.

1.4 Hypotheses

In this paper, I test three main predictions, following from the theoretical framing above:

Hypothesis 1: Behavioral frictions (inattention/inertia) materially affect firm value The first hypothesis to test is whether the empirically documented inattention rents actually matters for firm value at all. This is not trivial: there are still potential counterfactors, particularly at the extensive margin (for instance, more sophisticated consumers aware of these frictions who choose not to subscribe). Even if it does matter, a follow-up question, of course, would be *how much*? If the magnitude were small, the corporate finance implications would not be particularly interesting.

Hypothesis 2: Controlling for characteristics, subscription firms should hold less cash as a percentage of assets (due to lower precautionary motive)

The *precautionary cash motive* for why firms hold cash—the ability to avoid tapping expensive capital markets when shocks hit—has been extensively documented in numerous papers, most prominently in Opler et al. (1999), which found that firms with riskier cash flows and less external capital access hold more cash. If a subscription firm accounts for a predictable “higher-than-earned” baseline level of cash inflow, then the tail risk of sudden shortfalls should shrink, and the precautionary cash motive should be lower, because the need for self-insurance should be weaker. Because inattentive subscribers lift the baseline level of inflows, the firm sits farther from the edge of a funding shortfall. The insurance benefit of an idle dollar of cash therefore falls, even if the noise around that higher baseline is unchanged. In other words, if firms can estimate the sticky behavioral “quasi-annuity” component of recurring revenue well, they can view it similarly to accounts receivable in their managerial, if not their financial, accounting, particularly with relatively short (i.e. monthly) subscription windows.

This prediction is also interesting, because it would imply that subscription revenue models run counter to a more general trend documented a decade later by (Bates et al., 2009), who found that the precautionary motive explains a secular doubling in cash holdings for U.S. industrial firms since the 1980’s.

Hypothesis 3: Subscription firms invest more (due to loosened financial constraints)

The precautionary cash literature finds that more volatile cash flows lead to more precautionary cash; the cash flow volatility literature (e.g., Minton and Schrand (1999)). in turn, finds that riskier cash flows are associated with lower average levels of investment in capital expenditures, RD, and advertising. It is not necessarily the case that subscription revenue (top line) models reduce cash flow (bottom line) volatility at the firm level (and, in fact, I show in Section 5 that there does not seem to be much of a correlation between the two), I believe that both operate through a similar broader channel of “less risky” revenues and lower operating risk. Accordingly, I expect the imposition of a subscription model to lead to more investment, as predictable “rents” relax financial constraints and reduce the perceived need for idle cash. It is also plausible that firms would do other things with their “unearned” cash: increase leverage (to, for example, maturity match with more predictable revenue), or pay larger dividends, for example, I don’t find these in my results. In any case, even *a priori*, I would predict increased investment to be the primary value-accretive channel, because consumer-stickiness that this mechanism relies on also implies that there might be first-mover and industrial organization considerations that could make the opportunity cost of holding cash and not investing even higher than they otherwise would be. I intend to research these IO considerations more explicitly in future work.

2 Literature Review

This paper contributes to several existing strands of literature. Firstly, and most clearly, it extends to the firm-level a new and fruitful literature studying subscription behavior at the consumer level. This paper is particularly indebted to the findings of DellaVigna and Malmendier (2006) and Einav et al. (2025) which I discussed in the introduction. Grubb (2015) developed a model of inattentive consumers in environments where “the price of the next unit of service depends on past usage.” Miller et al. (2023) provide an interesting counterargument to Einav et al. (2025) and my own findings. They conduct a randomized field experiment with a newspaper company in order to “study both the inertia anticipated by consumers and the actual inertia they experience”, finding that while “Half of... auto-renewal contract takers continue to a full-price subscription while rarely using it... consumers preempt their future inertia; 24%-36% of potential subscribers avoid subscribing when offered an auto-renewal promo” such that “auto-renewal generates higher revenue in the medium-run due to payments from inert subscribers, auto-renewal and auto-cancel are revenue equivalent after one year, but with fewer subscribers in auto-renewal.” Johnen (2019) studies this potential adverse selection tradeoff theoretically. Posner et al. (2023) study auto-renewal choice architecture in political campaigns, finding that a default pre-checked box “automatically making all donations into recurring weekly contributions” were disproportionately responsible for ‘increased campaign donations by over \$43 million while increasing requested refunds by almost \$3 million’. I also broadly contribute to a literature viewing revenue models as financing / investment models. This idea, while on some level as old as commerce as itself, has its strongest academic source point with Myers and Majluf (1984). Luo (2024) studies the role of loyalty programs in firm financing. Lee and Parlour (2022) study the ‘efficiency implications of funding directly provided by consumers’.

Finally, I contribute to the extensive literature on precautionary cash and smoothness of cash flows by showing how subscription revenue models can act as an effective substitute for precautionary cash due to predictable inattention and other behavioral frictions. The

classical origin point of this literature was arguably Jensen (1986). Opler et al. (1999) was the foundational paper establishing that firms with ‘strong growth opportunities and riskier cash flows hold higher ratios of cash to total non-cash assets’. Bates et al. (2009) found that the precautionary motive explains the secular doubling in cash holdings from 1980 to 2009 amongst U.S. industrial firms, primarily driven by increased cash flow volatility. Minton and Schrand (1999) showed that cash flow volatility leads to ‘lower average levels of investment in capital expenditures, RD, and advertising’. Rountree et al. (2008) show that the market prefers less volatile earnings: 1% increases in cash flow volatility have 0.15% approximate decreases in firm value. Duchin et al. (2010) study the effects of the 2008 financial crisis on firm investment, finding, among other things, also finding ‘an important precautionary savings motive for seemingly excess cash’. Lins et al. (2010) survey CFOs in 29 countries and find that CFOs hold ‘non-operational cash’ primarily for precautionary reasons.

3 Data

I first create a novel dataset identifying ‘subscription economy’ firms as such, using public companies’ own annual filings (10-K statements). This designation is not entirely trivial for all firms. For example, a company like Netflix generates almost all (if not all) of its revenue from subscription fees, whereas a company like Disney generates some portion of its revenue subscription services (e.g. Disney+, Hulu, ESPN+), but not all. Nevertheless, revenue models from one vertical are, generally, part of the same capital stock that can be invested across other verticals. Since *any* exposure to the recurring revenue behavioral ‘annuity’ can be redeployed, in principle, across other (including non-subscription) verticals in the business, it makes sense to maintain a relatively loose definition of subscription firm for this study.¹¹

¹¹Obviously, some important variation is lost when choosing the firm-level of aggregation. Accordingly, I study the project-level in the film industry setting in a follow-on paper. Furthermore, I choose a scalar identification of *how* a company is to the subscription economy is less important than a Boolean indicator of *whether* the company is exposed. Even if I wanted to create a continuous variable identifying firm’s recurring

To begin, I hand-searched 10-K’s for 13 representative public firms that, in 2023, clearly had significant subscription economy exposure: Adobe (ADBE), Apple (AAPL), Chegg (CHGG), Disney (DIS), Dropbox (DBX), Microsoft (MSFT), Netflix (NFLX), Paramount Global (PARA), Peloton (PTON), Planet Fitness (PLNT), Salesforce (CRM), Verizon (VZ), and Warner Bros. Discovery (WBD). Across these 13 firms, I identified the following relevant keywords: subscription, subscribers, recurring revenue, streaming service, SVOD, paid membership, and membership fee.

Next, I scraped SEC’s EDGAR database for all 10-Ks (via SEC’s EDGAR) associated with all 2023-active¹² stocks (NYSE, AMEX and NASDAQ (exchange codes 1, 2 and 3), with share codes 10 and 11) from 1998-2023. I chose 1998 for my scraping, somewhat arbitrarily, because Netflix was founded in 1999; for all empirical analyses, however, I stick to 2002-on, because the 2002 Sarbanes-Oxley legislation mandated more uniformity in what companies report, mitigating any potential selection effects. I then create the variable of interest: a scalar subscription salience variable counting the number of the above keywords appearing in the firm’s 10-K for each firm-year. Since firm 10-K’s are of varying length, and since writing styles (on the verbosity-taciturnity spectrum) vary across firms, throughout my analyses I employ various cutoffs (1, 5, 10 and 20), with 5 seeming to represent the best balance between inclusivity (false positives) and exclusivity (diminishing returns) to define my dummy variable.

To preempt any possible concerns about my variable construction, I sanity-check my resulting dataset to investigate which firms my mechanism designates as ‘subscription firms’. I share just a few highlight patterns. From 2002-2007, Netflix (NFLX) had the most mentions, and Sirius (SIRI) had the second-most. From 2008-2012, these two companies switched positions. In 2023 (the last year of my sample), the top 5 subscription-exposed firms were

revenues as a percentage of total revenue, the lack of standardization in language and reporting across firms means that one would essentially have to hand-collect this data for all firms across a long time series. For this first study, I considered that prohibitively time-intensive.

¹²Note that because StockMapper doesn’t provide historical tickers, if a company’s ticker disappeared before 2023, one cannot retrieve its CIK or historical filings. This introduces mild survivorship bias, but not inaccuracy in the mapping

EchoStar (SATS) with 656 mentions, MarketWise (MKTW), Informatica (INFA), New York Times Co (NYT), and Fubotv Inc (FUBO) with 347 mentions. To give a sense of distribution: in 2023, of 3,163 firms: conditional on one or more mentions greater than 0, the mean number of mentions was 10.2, with a standard deviation of 33.24. 1,669 firms (52.7%) have no mentions of any subscription keywords. 1,494 (47.2%) have at least one. 1,216 (38.4%) have at least five. 515 (16.2%) have at least twenty.¹³

In another sanity-check, I look at which four-digit SIC industry codes are represented by the 5+ subscription dummy in my data (I exclude 9999 non-classifiable establishments from this summary statistic). The most-represented codes by total frequency are 7372: Prepackaged Software (where 71% of firms in this industry are subscription firms); 7379: Computer Related Services, Not Elsewhere Classified (51%); 7370: Computer Programming, Data Processing, and Other Computer Related Services (58%); 4813: Telephone Communications, Except Radiotelephone (71%); and 7389: Business Services, Not Elsewhere Classified (40%). Any industry fixed effects I employ in my empirical analysis use the first two digits.

3.1 Summary Statistics

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¹³Obviously, there is still potential for a few false positives (and significantly less, but existent, potential for false negatives) in the construction. For example, one might wonder if this mechanism inadvertently includes firms that are heavy *subscribers* to business-critical services that do not actually offer such recurring services themselves. While I cannot completely discount this, it is worth considering, first, how likely it is that a firm would repeat particular costs of business (e.g. subscription to a dataset) in their 10-K's 5 or more times; and, in the unlikely event that there are some firms that do, it is probably equally likely that therefore making my results conservative if anything. Furthermore, even in this unlikely but possible event, one could argue that such a firm, representing a clearly attentive and active (not inattentive nor inertial) user of the subscription in question, if they feel inclined to write about it in their 10-K's, is still exposed to another shade of the exact same subscription economy dynamics: subscription prices lower than they'd pay on spot, effectively subsidized by the less attentive consumers paying more than they would be on an equivalent spot market. Therefore, the same economic logic as my previous section would reveal this to be a similar "behavioral rent".

3.1.1 Table 1: Summary Statistics of Accounting Variables

Since this paper presents the first stylized characterizations of subscription firms in the literature, I include a broad list of summary statistics. The bins (following the logic of Eisdorfer et al. (2021), who similarly created portfolio bins off 10-K mentions of competitors) represent the number of subscription keywords mentioned in the 10-K for each firm-year in my panel: 0, 1–4, 5–19, and 20+ 10-K mentions.

Several patterns emerge in Table 1. The main one that is important for this paper’s thesis is that cash-to-assets is actually highly *positively* correlated with subscription mentions (correlation of 0.1876 when excluding microcaps), suggesting that subscription firms are relatively cash-rich to begin with; although, as I will soon show, when controlling for standard corporate finance covariates and industry fixed effects, the sign flips. This is consistent with a decreasing marginal utility of precautionary cash; subscription firms, in industries already characterized by less “hard” assets, may have more “wiggle room” to deploy idle cash than firms with lower cash-to-assets to begin with. The rest of the cross-sectional correlation data seems to accord with this: subscription firms seem generally to be firms with lower fixed-assets-to-assets and inventory-to-assets, and higher RD-to-assets, consistent with the relatively intangible business models one might expect from technologically-enabled subscription firms. Importantly, these trends are relatively monotonic as the bin thresholds get larger, another good sign for the internal validity of my subscription keyword measure.

4 Event Study Results

I first test **Hypothesis 1: Behavioral frictions (inattention/inertia) materially affect firm value**, relying on two recent Federal Trade Commission (FTC) actions for partial identification in an event study framework: the Commission’s 2023-2024 roll-out of the so-called “Click-to-Cancel” rule, and its June 2024 lawsuit against Adobe. Before reporting results, I briefly describe these regulatory actions and how they cleanly (but conservatively)

isolate at least one part of the “behavioral rent” mechanism, allowing me to get a market-implied value of behavioral frictions embedded in subscription revenue models.

4.1 Regulatory Background

4.1.1 The FTC’s October 2024 ”Click to Cancel” Rule

In 1973, the Federal Trade Commission (FTC) introduced the Negative Option Rule, consumer legislation originally responding to now deeply out-of-fashion billing models called “prenotification plans”. With these plans, common in, for example, book-of-the-month clubs or record subscriptions, companies would first send customers announcements about upcoming merchandise, then ship this merchandise automatically unless the consumer took action to reject it, and finally bill the consumer if he or she did not return the merchandise within a certain timeframe. The original FTC rule required sellers to, among other things, provide adequate notice before each shipment, and give customers a reasonable period to decline.

On March 23, 2023, the FTC proposed a major revision to this Negative Option Rule, this time regarding a more modern type of negative option: automatic renewal subscriptions. The proposed amendment, called the “Click-to-Cancel” rule, sought, in the FTC’s own words, “to make it as easy to cancel enrollment as it was to sign up”¹⁴. As the FTC chair at the time, Lina Khan, said bluntly: “Some businesses too often trick consumers into paying for subscriptions they no longer want or didn’t sign up for in the first place”. The initial proposal not only required the “simple cancellation mechanism” aforementioned, but also (crucially for later interpretation of my event study results) would have 1) required sellers to “first ask consumers whether they want to hear” new offers or modifications to their subscription before proposing them during the cancellation process, and 2) required “sellers to provide an annual reminder to consumers enrolled in negative option programs involving anything other than physical goods, before they are automatically renewed.” After a public comment

¹⁴<https://www.ftc.gov/news-events/news/press-releases/2023/03/federal-trade-commission-proposes-rule-provision-making-it-easier-consumers-click-cancel-recurring>

period and multiple rounds of informal hearings, the FTC finalized the rule on October 16, 2024. However, in response to industry pushback, the final version dropped these last two points.¹⁵ (The relative leniency of the final rule compared to the initial proposal will become important in my event study design.)

From a financial lens, the FTC’s action marks a rare instance in which the cash flow predictability and behavioral inertia associated with subscription models was explicitly reframed as a potential consumer harm. By targeting the design architecture that helps generate behavioral rents—default renewal, inertia, and exit friction—the FTC made clear that it sees these features not as neutral design choices, but as mechanisms through which firms extract value from disengaged users. This rule, in turn, gives us a natural quasi-experimental setting to ask how much of subscription firm value is attributable to the frictions this particular litigation covers.¹⁶

For my event study around the “Click to Cancel” rule, I identify five key regulatory dates associated with the rule’s development, each of which plausibly contained new information that could have affected investor expectations about the final legislation:

1. **March 23, 2023 – Proposal date:** The FTC first formally proposed the rule. This represents a relatively “clean shock” to expectations, revealing for the first time publicly both the Commission’s intent and the scope of regulation under consideration. However, it is also the case FTC proposals frequently do not become rules, and so market reactions might be tempered accordingly.

2. **December 4, 2023 – Announcement of informal hearings:** The FTC publicly announced it would hold informal hearings regarding this proposal. Particularly noteworthy from a market information perspective was that the FTC announced the six commenters who would present their positions in these hearings, including “International Franchise As-

¹⁵<https://www.ftc.gov/news-events/news/press-releases/2024/10/federal-trade-commission-announces-final-click-cancel-rule-making-it-easier-consumers-end-recurring>

¹⁶These, in turn, represent only a litigable subset of frictions that could be at play; the research from, e.g. Einav et al. (2025) or DellaVigna and Malmendier (2006), for example, do not generally rely on the company doing anything litigable nor even morally questionable at all. They simply rely on aggregate behavioral biases which consumers are, probably, themselves aware of, and would probably not blame the companies for.

sociation, TechFreedom, the Performance Driven Marketing Institute, NCTA – The Internet Television Association, FrontDoor, and the Interactive Advertising Bureau.”

3. **January 16, 2024 – Informal hearings are held:** While not a binding regulatory step, these hearings and the public comments or testimony therein may reflect investor interpretation of how seriously the rule is being taken and the constitution of the final rule.

4. **October 16, 2024 – Final rule announced:** The FTC announced the final rule. Remember also that this version softened the original proposal by dropping the annual reminder requirement and lifting the proposed pitch ban.

5. **November 15, 2024 – Publication in the Federal Register:** This date locks in the compliance timeline (180 days post-publication, or May 14, 2025) and serves as the final regulatory milestone.

4.1.2 The FTC’s June 2024 Lawsuit against Adobe

In the midst of the regulatory rollout of its “Click-to-Cancel” rule, the Department of Justice, on notification and referral from the FTC, filed a federal complaint on June 17, 2024 against Adobe and two of its top executives. The complaint argued that the firm “deceived consumers about early termination fees” and “inhibited cancellations”, with the core allegation centering on Adobe’s popular “annual paid monthly” plan. Adobe presented this annual contract plan to customers with the *monthly* pricing front and center, and only disclosed that cancellations in the first year would trigger a hefty early termination fee (ETF) of 50% of remaining payment via hover-over text or small print. In the FTC’s words: “[Consumers] report they were not aware of the existence of the ETF or that the “annual paid monthly” plan required their subscription to continue for a year.”¹⁷. In addition, the FTC argued that consumers trying to cancel their subscriptions were met with a multi-step gauntlet, saw their calls “dropped”, and in some cases, continued billing even after purported cancellation.

The litigation against Adobe provides an excellent laboratory for my study for two main

¹⁷<https://www.ftc.gov/news-events/news/press-releases/2024/06/ftc-takes-action-against-adobe-executives-hiding-fees-preventing-consumers-easily-cancelling>

reasons. The first is timing: the case landed between the FTC’s Click-to-Cancel rule proposal (March 2023) and its final announcement (October 2024), reinforcing the perception that the FTC was actively focused on what it deemed unfair subscription practices. The second is target selection: Adobe is not just a random company, but one of the posterchildren of the entire subscription economy. In that sense, this announcement by the FTC functioned as both warning shot and concrete instantiation of the frictions the broader rule was meant to address.

More subtly, while the Click-to-Cancel rule operates through *prospective* design constraints, the Adobe action focuses *retroactive* penalties for already-deployed architecture. Thus, if the subscription economy at-large had hoped that contemporaneous rule-following would immunize them from legal restitution for past practices, this case disabused them of that notion, and (as I will show next), equity markets appear to have reacted accordingly.

4.2 Methodology

I estimate cumulative abnormal returns (CARs) around these key FTC regulatory events using a standard event study framework: a Fama-French 5-factor model plus momentum, with a 100-day estimation window ending 50 trading days prior to each event, requiring at least 70 valid daily returns for inclusion, and a baseline event window of $[-5, +5]$ trading days.

I include all subscription (keyword count greater than or equal to 5) firms in the fiscal year 2023 (i.e., reporting in 2024). Since the subscription economy is quite broad and impact is likely to be heterogenous across industry, I then identify three core firm industry groups based on their likely exposure to consumer-side frictions: newspapers, Software-as-a-Service (SAAS), and subscription video on demand (SVOD) firms. The choice of newspapers as a likely high-friction industry is motivated by Sheil et al. (2023), which studied news websites in four different countries and documented numerous cancellation frictions¹⁸ The choice of

¹⁸The authors title their paper *Staying at the Roach Motel*, after the famous insect trap from the 1970’s with the tagline “Roaches check in, but they don’t check out!”

SAAS was motivated both by its stronger B2B (rather than B2C) orientation relative to newspapers, and the fact it represents the broad industry of Adobe, the most prominent specific FTC lawsuit target during this period, is in. Another interesting feature of SAAS firms is that they were arguably more exposed to the original rule’s proposal (which was stricter about pitches to continue subscriptions and annual reminder requirements) than the final rule’s provision (relative ease of cancellation) due to the relative size and perceived sophistication of their customers, at least when compared to newspapers. Finally, as a sort of negative control group, I select firms with streaming video on demand (SVOD) subscription services because, as a group, they would not be affected much by the FTC’s rule, as most are quite easy to cancel already.

I then prompted ChatGPT to select, *a priori*, the most representative publicly traded firms in each category. The final sample includes:

Newspapers: NWSA, GCI, TRI, NYT

SAAS: CRM, ADBE, NOW, WDAY, SNOW, OKTA, CRWD, DDOG, TEAM

SVOD: ROKU, FOXA, WBD, DIS, PARA, NFLX, CMCSA

I first run the two full-sample tests on the publicly traded firms which have 5 or more mentions of subscription economy-related keywords in their (2024-published) 2023 10-K’s. All results are reported in Table 2.

The first event study [on Adobe] features 609 firms with non-missing returns on June 17. These firms showed a statistically significant negative CAR of approximately 1.9%. The second features 2942 total events (firm-dates) across my five designated event dates related to the Click-to-Cancel rule. These firm-dates showed a statistically significant positive CAR of approximately 2.4%. It might at first seem curious that there was any sort of a positive reaction to the Click-to-Cancel rule across the subscription economy. The likely explanation is that, while the June targeted enforcement against Adobe triggered fear about potential retrospective lawsuits and the prospective Click-to-Cancel rule for the broader subscription economy, October’s softened rule (relative to the March 2023 proposal) offered either partial

relief, regulatory and litigative clarity, or both. To see if this is the case, I run the event study again on *just* the October 16, 2024 announcement date. This represents not only the final codification of the loosened rule, but the first event related to the Click-to-Cancel rule following the Adobe action. Sure enough, on October 16, 2024, 587 subscription economy firms with non-missing returns show a statistically significant positive CAR of approximately 3.3%.

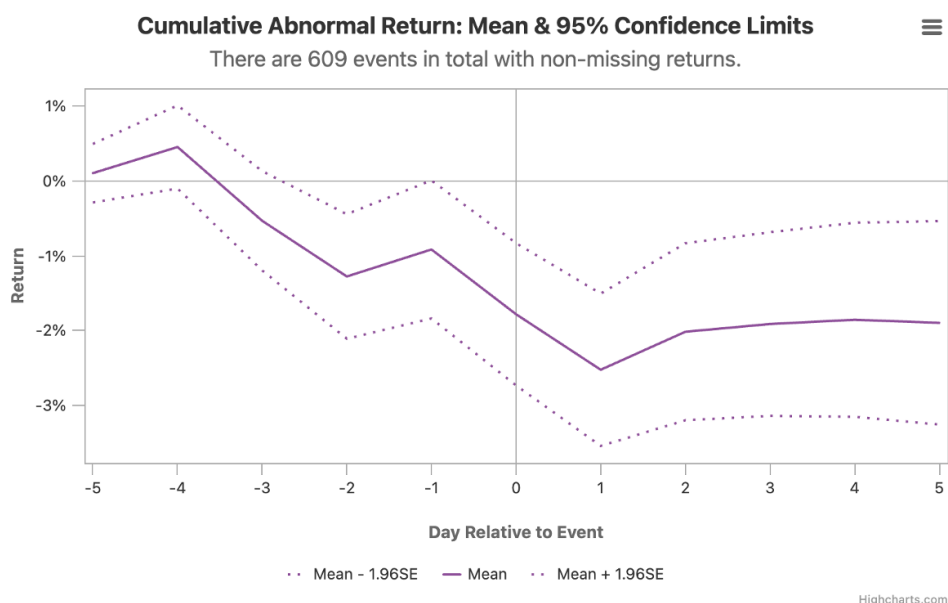


Figure 3: June 17, 2024: FTC action against Adobe, All Subscription Firms

A broad-brush stroke suggests that the market considers the general class of litigated frictions to affect something like 2% of firm value on average across the entire cross-section of subscription firms. The counter-result on the announcement day may suggest, at least in part, how much of that drop in value was attributable to the rules the FTC could have imposed but did not, versus those present in the final rule. There are at least two other potential explanations worth future exploration, however. One is that the regulation itself, once certified, mitigates an adverse selection effect against sophisticated customers who avoid subscriptions due to these frictions.¹⁹ Stronger regulations might help some firms, with

¹⁹I can attest to cancellation frictions being the main reason I have not re-subscribed to *The Economist*. I suspect some of you know exactly what I'm talking about.

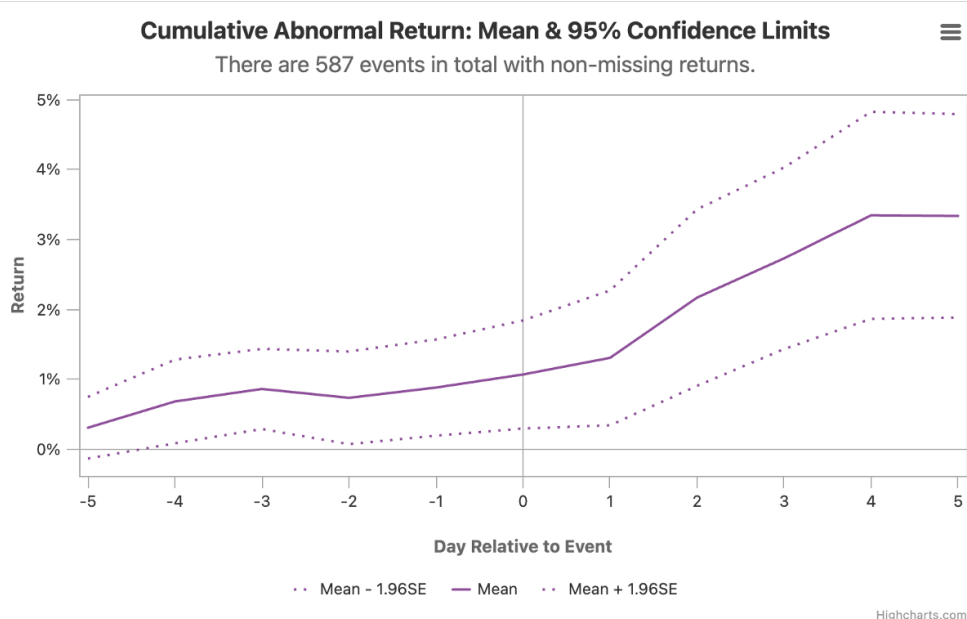


Figure 4: October 16, 2024: FTC Click-to-Cancel Announcement Date, All Subscription Firms

primarily sophisticated customer bases, at the extensive margin, if sophisticated customers may now be more willing to enter subscription relationships, knowing that new legislation reduces the risk of entrapment. Another point is that some services (e.g., Netflix) may benefit from inattention rents even without coercive cancellation flows, which this regulation cannot possibly get after; others, like newspapers, derive value directly from hard-to-cancel architectures, which are more particularly targeted by the FTC’s action. A final note: since many friction-based rents cannot be easily regulated—e.g., passive under-use or overoptimistic plan selection—it is likely that these estimates *understate* the true value of inattentive customers to subscription firms. Even if any or all of these explanations are true to some extent, there is certainly important heterogeneity across industries, which I next employ my three chosen sub-samples to examine.

4.3 Sub-Sample Results

4.3.1 Newspapers

Employing the five FTC Click-to-Cancel regulatory dates as events, I find that my four newspaper stocks experience a negative CAR of 3.9%. However, consistent with the hypothesis that this rule would affect B2B and B2C firms differently, I also test the B2B newspapers (Gannett (GCI), NewsCorp (NWSA), and The New York Times Company (NYT)) separately from Thomson Reuters (TRI), which specializes mostly in B2B offerings. An interesting finding however is that, on the final October 16th, 2024 announcement day, while the three B2C newspapers experience negative CARs of -14.3% (GCI), -1.1% (NWSA) and -3.4% (NYT), the more B2B-focused Thomson Reuters experiences a CAR indistinguishable from zero (-0.01%). I report the mean CAR and firm-level CARs on the October 16th announcement date in the appendix.

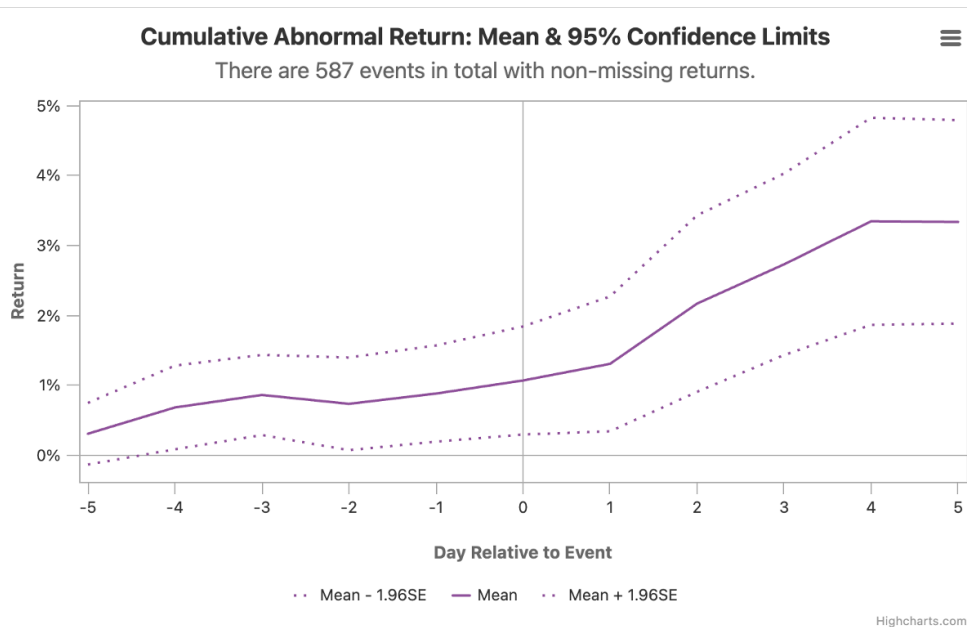


Figure 5: FTC Click-to-Cancel, All 5 Relevant Dates, Newspapers²⁰

4.3.2 SAAS

Employing the five FTC Click-to-Cancel regulatory dates as events, I find that the nine SAAS firms average a positive CAR of 5.0%. This is broadly consistent with what I found for the subscription economy in general, and particularly consistent with a “relief rally”, i.e. the market’s interpreting the final rule as more lenient than expected (especially in the wake of the Adobe lawsuit). I report the mean CAR and firm-level CARs on the October 16th announcement date in the appendix.

4.3.3 SVOD (Film/TV Streaming Services)

Employing the five FTC Click-to-Cancel regulatory dates as events, I find that my streaming and media firms show no significant reaction to the rule (positive CAR of 0.01%). Because these services are, as a rule, relatively straightforward and simple to cancel, their inclusion helps demonstrate that the observed CARs are not just a class-wide reaction to “subscription” language, but seem to track actual exposure to behavioral friction risk. I report the mean CAR and firm-level CARs on the October 16th announcement date in the appendix.²¹

INSERT TABLE 2 AROUND HERE

4.4 Discussion

Context reveals these magnitudes to be strikingly large: if the market capitalization of the New York Times is (as it is around the time of this writing) about \$8 billion, 3% of that value is \$240 million. Is it really possible that so much economic value could be attributable to behavioral inertia (only the litigable kind, at that?) One thing to consider is that 3% of value is not the same as 3% of customers; inattentive consumers are, at least in the short-run, more valuable, because they come with effectively zero cost-of-goods-sold. This explanation

²¹One noteworthy observation from this appendix is that there is significant heterogeneity of reaction to the announcement from all seven firms. WBD, PARA, ROKU and FOXA see negative reactions; DIS, NFLX and CMSCA see positive reactions. It is possible this separates fuzzily onto the relative ease-of-cancellation (and, relatedly, age of customer base) for these firms, but I don’t explore that here.

is not fully satisfying, however, because most subscription firms are in industries where marginal cost-of-goods-sold is relatively low (even newspapers, since they are now largely online). Nevertheless, I still believe that this is actually an *underestimate* of the effect of “behavioral rents” on subscription firm value, given that Einav et al. (2025) find that inattention and switching costs inertias “roughly double seller revenues on average, holding fixed initial subscribers”, and the FTC’s action can only necessarily offset enforceable (and litigable) inertia. In particular, the time dimension of a subscription (i.e., that the fixed cost component of the two-part tariff covers a subscription period, frequently one month or one year, where only variable cost — which is frequently, as in the case of Netflix, zero) is relevant, and facilitates at least three other interesting “behavioral” dynamics which cannot directly be accounted for by this regulation, and which future research can disentangle. I discuss some of these in Appendix 1.

5 Firm-Level Results

5.1 Baseline Panel

Having shown that the market-implied value of consumer inattention and inertia is considerable, I next try to understand the *how* through a corporate finance lens: what are the channels through which these frictions affect firm value? In particular, I test **Hypothesis 2: Controlling for characteristics, subscription firms should hold less cash as a percentage of assets (due to lower precautionary motive)**, and **Hypothesis 3: Subscription firms invest more (due to loosened financial constraints)**.

To test this, I estimate panel regressions of the form:

$$Y_{it} = \alpha + \beta \text{Subscription}_{it} + \gamma X_{it} + \delta_{\text{industry}} + \theta_t + \epsilon_{it} \quad (1)$$

where Subscription_{it} is a dummy equal to 1 if a firm i has 5 or more 10-K mentions

of subscription-related keywords in a given year t . The vector X_{it} includes standard characteristics of size, market-to-book, profitability, and book leverage. All regressions include firm-clustered standard errors, two-digit industry fixed effects, and quarter fixed effects. Full results are shown in Table 3. For robustness, I include specification *without* industry fixed effects in the appendix.

INSERT TABLE 3 ABOUT HERE

Consistent with Hypothesis 2, that recurring revenue reduces precautionary cash, I find that, controlling for firm characteristics, industry fixed effects, and time (quarter) fixed effects, subscription firms hold significantly 2.21% less cash to assets, statistically significant at the 1% level. (This is also economically quite significant given the sample mean of cash-to-assets is approximately 20%.) At the same time, consistent with Hypothesis 3, I find that investment increases by 5.62%, also significant at the 1% level.

These results are consistent with my theoretical predictions: if firms are receiving predictable “behavioral rents”, they can hold less precautionary cash and invest more in the firm’s longer-term assets. One would also suspect, if this narrative is true, that there is a general shift from a short-term to long-term orientation in the firm: subscription firms, in other words, can generally hold less of most working-capital (shorter term) assets on the balance sheet, and therefore more longer-term assets.

To test this, I run the same regressions with different outcome variables. Looking at other “short-term” outcome variables besides cash-to-assets, I find that subscription firms are also associated with lower inventory-to-assets and R&D-adjusted operating cash flows, significant at the 1% level, signifying less inventory-heavy business models, and higher reinvestment intensity and deferred monetization. Decomposing the investment (longer-term) margin into intangible and tangible components, I find that subscription firms are weakly associated with higher RD-to-assets and higher CapEx-to-assets, significant at the 10% level. I also find that subscription firms also are associated with increased (by 2.21%) net leverage, significant at the 1% level, but this could be accounted for simply by the lower cash-to-assets. It does,

however, suggest that subscription firms are not reacting to lower cash-to-assets by decreasing their leverage, and that they therefore view their net borrowing capacity as higher, consistent with the reduction to cash-to-assets being a reduction in *precautionary* cash flows.

5.2 Is this as simple as lower cash flow volatility?

Besides “behavioral rents”, one alternative mechanism that could explain my results is that firms with subscription revenue models simply have lower cash flow volatility. This would be consistent with existing literature that studied cash flow volatility’s effect on corporate finance. Minton and Schrand (1999), for example, found a strong sensitivity of investment to cash flow volatility, and Bates et al. (2009) attribute the secular doubling in cash-to-assets across the United States industrials sector from 1980 to 2006 to precautionary cash-to-assets in response to higher cash flow volatility. If subscription firms simply induce lower cash flow volatility, this would directly explain both core results from this section: firms would be simply making a *choice* to impose lower cash flow volatility.

To investigate whether cash flow volatility drives my results, I follow Minton and Schrand (1999) to establish a rolling measure of cash flow volatility. This is calculated as the coefficient of variation (standard deviation divided by absolute value of mean) in a firm’s quarterly operating cash flow over the six-year period preceding the sample years. Since the resulting measure is unitless, it is comparable across all firms. I, following these authors, require at least 15 non-missing observations during those 24 quarters to make my sample.

First, I find that my subscription dummy is effectively uncorrelated with cash flow volatility in the cross-section (-0.0014). While a subscription revenue model should reduce revenue volatility, by construction, cash flow is a bottom line variable, and, if firms are actively reinvesting, may not appear to have much relationship with top-line volatility. A firm could have smooth recurring revenues but highly lumpy cash flows, for example, due to front-loaded customer acquisition or episodic investment cycles. This distinction may be especially relevant in platform or subscription settings where firms incur short-term losses in pursuit of

long-term customer LTV. It is also possible that the cross-section may simply fail to capture these dynamics: early-stage volatility followed by steady-state stability would not be visible in snapshot measures.

Nevertheless, the two could be related through a similar pathway of reducing operating risk, or there could be heterogenous variation that does not appear in a simple correlation measure in the cross-section. To test this, I run the same firm-level panel regressions as Table 3, now including this cash flow volatility measure as an additional control. Table 4 presents these results.

INSERT TABLE 4 ABOUT HERE

Including cash flow volatility as another control weakens the statistical significance of my results slightly, but my core variables of interest (cash-to-assets and investment) remain significant and of similar magnitudes (1.6% reduction in cash-to-assets at the 5% level, and 3.4% increase in investment at the 10% level). Since both my mechanism (through the subscription dummy variable) and cash flow volatility are associated with general “reduced operating risk”, it is not surprising that there would be some effect through that pathway.

6 Conclusion and Future Research

The primary thesis of this paper has been simple: subscription revenue models are also, in part, financing models. While recurring revenue models have become ubiquitous, empirical corporate finance has not yet reckoned with the financial consequences of this shift. In this paper I’ve focused on just one channel: the exploitation of predictable behavioral frictions such as subscriber inattention, facilitating a stream of quasi-liability-like cash flows with characteristics that resemble small behavioral annuities (what I’ve called, more precisely, “behavioral rents”)—smoother, stickier, and in some cases detached from real-time service use. Event studies around FTC actions targeting friction-heavy subscription cancellation show a significant (roughly 2%) market-implied value of these frictions to subscription economy

firms. Consistent with my hypothesis, subscription firms hold less precautionary cash and invest more, as part of a general shift from short-term liquidity preservation to longer-term value creation. I also find that cash flow volatility does not fully, or even mostly, seem to explain these core results, strengthening my core argument that the revenue model itself, rather than merely the smoothness of operating performance, elicits consumer behavior, which, in turn, elicits first-order consequences for firm behavior and valuation.

This paper makes several contributions. It is the first to document certain firm-level stylized facts about subscription firms, the first to explicitly test behavioral subscription friction effects on firm value, and the first to study corporate finance variables through a panel dataset identifying subscription economy firms as such. Since nobody has yet studied the corporate finance implications of the subscription economy, there are many different channels and avenues I could have considered focusing on; therefore, it is my hope that the most significant contribution of this paper will have been that it kicked off a vibrant and overdue literature.

There are, naturally, several other possible channels through which recurring revenue models might uniquely affect firm behavior, which I intend to explore in a follow-up research. In my next follow-up paper, I look at the platform economics and data collection externalities that result from two-part tariffs. For example, firms like Netflix and Spotify are able to collect particularly rich and detailed data from their subscribers, particularly because they are unconstrained by marginal costs once the first part of their two-part tariff is paid, which should, in principle, make them better at giving customers what they want (via recommendation algorithms) in future periods without the need for explicit market research. The fact that the SVOD firms showed no particular reaction to the FTC's Click-to-Cancel rule suggests that the market may not believe they are as connected with the same behavioral frictions that that rule captured (which is not to say they are not still beneficiaries of inattentive or inertial rents), which suggests other reasons for the adoption of a subscription revenue model (for example, cable or satellite television offerings have always

operated as a sort of subscription.) Attention Economy firms may still be beneficiaries of this *Inattention* Economy, on other words, but its chief reasons for growing subscription platforms may diverge at least in part from their subscription economy brethren.

Additionally, the industrial organization of industries heavily exposed to the subscription economy, particularly given the documented behavioral stickiness, would make for an important and interesting line of research. The field’s classic entry and exit models (e.g. Hopenhayn (1992)), for instance, assume spot pricing. Switching costs may confer incumbents market power over existing (locked-in) customers (consumers who have ongoing service (and perhaps data or content saved with a provider) face friction in switching), and also intensify competition for new customers. It might, for instance, be interesting to look at the race-to-the-bottom of content spend in the entertainment industry, or to analyze subscription firm acquisitions or attempted acquisitions (e.g. Adobe’s attempt to acquire Figma) seemingly motivated by locking-in network and platform effects. At the limit, this may shed more light on the *investment* side of my corporate finance findings: firms may allocate capital toward long-term assets (customer relationships, brand, proprietary tech/content) rather than hold excess cash, since winning (or being one of the winners) in a sticky market can yield significantly larger rents later. First-mover advantages likely particularly matter if there is some “threshold” past which small “subscription creep”, multiple small subscriptions that a consumer forgets to cancel, become noticeable; firms would want to be one of the first in their category that users subscribe to.

In a fuller range model of the subscription economy, dynamic considerations are likely important: is also possible that financial constraints play a role in growing a subscription platform, but then firms become more shock-resilient later. (This may be related to the positive correlation between my subscription dummy and cash-to-assets in the cross-section, but the negative correlation after controls in the panel regression). It might also be interesting to research how private companies, particularly those that are not yet making profits, use recurring revenue models to signal a platform with value that can be monetized later to

venture capitalists, potential acquirers and at IPO. Since some technology platforms rely on a critical mass of users, perhaps they use lower entry fees (or even free tiers) and monetize through additional variable charges.²²

It may also be worth analyzing the effects of multi-product bundles *across* industries in raising effective switching costs. By offering a suite of services under one subscription (a la Amazon Prime bundling free shipping, video streaming, music, etc.), which would be hard to replicate by competitors, an incumbent can raise the effective switching cost such that a customer leaving would lose the entire bundle’s value, not just one product. This can deter entry or expansion by rivals (a strategy of market foreclosure), as discussed in, for example, Nalebuff (2004).

It is, finally, worth considering what may happen to the subscription economy once retail consumers become more broadly aware of the extent to which their behavioral quirks are, as evidence is mounting to suggest, subsidizing large companies wastefully. With this speculation in mind, I conclude with a passage from a nineteenth century British mathematician, in eerie anticipation of the ubiquitous recurring bundles we’ve nearly all grown used to:

“Are there many crabs here?” said Alice.

“Crabs, and all sorts of things,” said the Sheep: “plenty of choice, only make up your mind. Now, what DO you want to buy?”

“To buy!” Alice echoed in a tone that was half astonished and half frightened—for the oars, and the boat, and the river, had vanished all in a moment, and she was back again in the little dark shop.

“I should like to buy an egg, please,” she said timidly. “How do you sell them?”

“Fivepence farthing for one—Twopence for two,” the Sheep replied.

“Then two are cheaper than one?” Alice said in a surprised tone, taking out her purse.

“Only you MUST eat them both, if you buy two,” said the Sheep.

²²I thank Andrey Malenko for these last two suggestions.

“Then I’ll have ONE, please,” said Alice, as she put the money down on the counter. For she thought to herself, “They mightn’t be at all nice, you know.”

— Lewis Carroll, *Through the Looking-Glass* (1871)

A Three Other Behavioral Frictions (From Section 4 Discussion)

As I note at the end of Section 4, there are at least three other consumer behavioral frictions native to subscription models that neither simple inattention / inertia, nor choice architecture (a la the Click-to-Cancel rule) can fully account for, but which reveal the results from Section 4 to be conservative. Here are the three I have in mind:

1) **Induced demand (relative to *a priori* demand)**: If a laundry subscription service, for example, charges less overall per bag with a subscription model than for single-bags—as is almost always the case with any such ‘bulk’ model—there is an implicit assumption that they are *inducing* demand by offering consumers a lower marginal cost per bag washed. As a one-off, this is simply bundling strategy, well-trodden territory in industrial organization literature, but unique to subscriptions. The fact that this recurs and potentially *shapes* demand through a consumer stickiness channel, however, is subtly unique to subscriptions.

2) **Wishful thinking by consumers**: It may also not necessarily be that a subscriber is inattentive, but rather that they overestimate how much they will use the contents of the subscription, leading them to choose subscription plans that are effectively too costly for their actual usage. For example, DellaVigna and Malmendier (2006) study consumer expectation biases in a health club setting, finding that generally people pay more for gym membership (subscriptions) than if they had simply paid for the day each time. Thus the “Planet Fitness at New Year’s Eve” strategy is sort of like a gift card that never gets redeemed, and thus constitutes essentially a cash bonus to the firm.

3) **Intentional Non-Consumptive Subsidization or Option Value**: Most subtly, some people like to subscribe to things that they generally support, particularly if it is not especially expensive, in solidarity with the cause or business. Many subscribers to, in particular, journalistic outlets, Substack blogs, Patreon, (or, I would be unfortunately remiss to exclude given its \$6.63 billion gross revenues in 2023, OnlyFans), might be happy

to effectively donate to individuals, firms, or “causes”, even in periods where they are not using the product or service, out of solidarity for the institution or individual, or, relatedly, due to the future option value of keeping the institution or individual a going business concern for when I *will* want to use it.²³ Relatedly, there is some option value in knowing you *could* use the subscription if you needed it, almost like purchasing insurance.²⁴

B Full Event Studies

I include the full event studies included in Section 4 below. I also include the firm-specific CAR’s on the announcement date, October 16th, 2024.

C Asset Pricing Extensions

C.1 Fama French Regressions

Since this is the first paper to establish firm-level finance facts about subscription firms, I thought it would be interesting to report “asset pricing summary statistics” in the form of monthly Fama-French six-factor regressions (including momentum) for portfolios formed on these same buckets over 259 months. For all empirical asset pricing extenses, I use CRSP monthly return data, winsorize all returns above or below 20%, and take positive prices as negative. Following Ken French’s general methodology, portfolios are formed in June of each year t based on year $t-1$ subscription data (i.e. the 10-K from year t). The long-short portfolios (5+ minus 0 and 20+ minus 0) do not deliver statistically significant alpha. I would not necessarily expect the long-short portfolio to report alpha over-and-above (or

²³Example: I keep an active subscription to a Hallow, a Catholic prayer and meditation app, even during busy research periods where I know I will almost certainly not be using it (even if, arguably, these are the periods where I could most use divine inspiration) in order to do my small part in keeping it afloat.

²⁴Example: I have a subscription for a 24/7 text hotline with my cat’s veterinarian, which I hardly use and don’t expect to use very much, in case of emergency. But I also subscribe to the Formula 1 app for the same reason, even though I normally can watch Grands Prix on television; I never know when I’m going to be on the road mid-race, and don’t want to miss a couple laps re-downloading and subscribing to it.

under-and-below) a Fama French six-factor regression, unless one would expect that this represents an orthogonal priced risk factor.

It is, however, instructive to look at the factor loadings for these long-short portfolios. Subscription firms are high beta (e.g., 0.935 for 5–19 vs. 0.793 for 0), and exhibit strong negative exposure to both HML and CMA, suggesting, as intuition would suspect, that subscription firms are primarily investment-heavy growth firms. Interestingly, the 20+ minus 0 portfolio also loads negatively and significantly on RMW (−0.1937), implying negative exposure to an operating profitability factor.

C.2 Cross-Sectional Monthly Return Regressions

I also report cross-sectional characteristics regressions (using the characteristics of Kojen and Yogo (2019)), finding that subscription firms are associated with lower monthly returns. This might be consistent with a lower cost-of-capital / discount rate channel, and is consistent with my general view of lower operating risk. However, I leave this result in the appendix because the result only holds when I cluster standard errors by firm. When I double cluster by firm and time, the significance on the subscription dummy variable (as well as on Market Beta) disappears.

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D Corporate Finance Panel Without Industry Fixed Effects

Table 1: Summary Statistics by 10-K Subscription Mentions

# 10-K Subscription Mentions		All Stocks				Excluding Microcaps					
		0	1-4	5-19	20+	Correlation	0	1-4	5-19	20+	Correlation
Size	Firm-Quarters	103,897	30,978	11,811	9,625		63,194	18,346	6,953	6,850	
	Mean	7.1668	6.9111	6.6565	6.9180	0.0160	8.3449	8.2719	8.0849	7.7356	-0.0318
Market-to-Book	Median	7.1945	6.9624	6.7468	6.8905		8.2156	8.1754	7.8335	7.5609	
	Mean	2.5087	3.8755	3.5288	10.6762	0.0081	2.5578	2.6173	3.3882	12.3044	0.0081
Profitability	Median	1.8933	2.2150	2.5730	3.5930		2.3155	2.7203	3.2299	4.7047	
	Mean	0.0119	-0.1010	-0.0558	-0.0536	-0.0043	0.0383	0.0239	0.0550	-0.0058	-0.0007
SGA-to-Assets	Median	0.0444	0.0373	0.0271	0.0090		0.0530	0.0505	0.0436	0.0187	
	Mean	0.0572	0.0783	0.0982	0.0995	0.0948	0.0476	0.0538	0.0719	0.0843	0.1438
Operating CF-to-Assets	Median	0.0372	0.0498	0.0725	0.0801		0.0338	0.0393	0.0596	0.0727	
	Mean	0.0097	-0.0063	-0.0076	0.0021	-0.0559	0.0219	0.0206	0.0185	0.0125	-0.0889
Investment	Median	0.0204	0.0176	0.0154	0.0135		0.0239	0.0224	0.0213	0.0165	
	Mean	1.1247	1.1464	1.1833	1.1791	0.0062	1.1253	1.1515	1.2012	1.2030	0.0524
Capx-to-Assets	Median	1.0527	1.0586	1.0481	1.0681		1.0603	1.0702	1.0695	1.0886	
	Mean	0.0231	0.0223	0.0202	0.0206	-0.0541	0.0262	0.0237	0.0222	0.0208	-0.0588
RD-to-Assets	Median	0.0106	0.0100	0.0097	0.0105		0.0140	0.0125	0.0118	0.0111	
	Mean	0.0114	0.0183	0.0202	0.0213	0.0867	0.0073	0.0089	0.0130	0.0199	0.1835
Net Leverage	Median	0.0000	0.0000	0.0002	0.0158		0.0000	0.0000	0.0000	0.0160	
	Mean	0.0398	-0.0078	-0.0028	-0.0476	-0.0462	0.1090	0.0845	0.0440	-0.0258	-0.0969
Dividend-to-Equity	Median	0.0730	0.0276	0.0087	-0.0568		0.1317	0.1090	0.0544	-0.0305	
	Mean	0.0259	0.0039	0.0168	0.0197	-0.0002	0.0337	0.0019	0.0219	0.0191	-0.0002
Cash-to-Assets	Median	0.0052	0.0000	0.0000	0.0000		0.0114	0.0024	0.0000	0.0000	
	Mean	0.1818	0.2403	0.2577	0.2985	0.1159	0.1463	0.1805	0.2230	0.2942	0.1876
Fixed-Assets-to-Assets	Median	0.0825	0.1253	0.1748	0.2442		0.0729	0.0984	0.1566	0.2452	
	Mean	0.2246	0.1908	0.1501	0.1352	-0.1670	0.2535	0.2127	0.1565	0.1354	-0.1903
Inventory-to-Assets	Median	0.1379	0.1010	0.0876	0.0798		0.1729	0.1217	0.0922	0.0796	
	Mean	0.1071	0.0760	0.0704	0.0287	-0.2033	0.1037	0.0758	0.0627	0.0206	-0.2314
	Median	0.0540	0.0162	0.0096	0.0000		0.0648	0.0213	0.0108	0.0000	

Table 2: Event Studies on FTC Actions

Event	Subset	# of Events	CAR (Mean)	t-stat	p-value
6/17/24 Adobe Lawsuit	All	609	-0.0190	-2.73	0.007
Click-to-Cancel Rule - All 5 Dates	All	2942	0.0244	5.07	0.000
10/16/24 Click-to-Cancel Announcement	All	587	0.0334	4.92	0.015
Click-to-Cancel Rule - All 5 Dates	Newspaper	20	-0.0388		
Click-to-Cancel Rule - All 5 Dates	SAAS	45	0.0504		
Click-to-Cancel Rule - All 5 Dates	Streaming	35	0.0098		

Table 3: Subscription Model and Corporate Finance Outcome Variables

	<i>Dependent variable:</i>						
	Cash / Assets (1)	Inv. / Assets (2)	RD-Adj OCF / Assets (3)	Investment (4)	Net Leverage (5)	RD / Assets (6)	CAPX / Assets (7)
Subscription (5+ 10-K mentions)	-0.0221*** (0.0055)	-0.0061*** (0.0023)	-0.0081*** (0.0027)	0.0562*** (0.0187)	0.0221*** (0.0055)	0.0016* (0.0009)	0.0017* (0.0009)
Size (Log Assets)	-0.0260*** (0.0029)	-0.0097*** (0.0012)	0.0125*** (0.0015)	-0.0018 (0.0039)	0.0260*** (0.0029)	-0.0092*** (0.0014)	0.00006 (0.0004)
Market-to-Book	0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Profitability	0.0000** (0.0000)	0.0000 (0.0000)	0.0001 (0.0001)	0.0000 (0.0000)	-0.0000** (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
Book Leverage	-0.0958*** (0.0189)	0.0002 (0.0033)	-0.0433*** (0.0092)	-0.0761*** (0.0217)	1.0958*** (0.0189)	0.0089** (0.0041)	-0.0104*** (0.0018)
Constant	0.3290*** (0.0603)	0.1345*** (0.0328)	-0.0889*** (0.0232)	1.0952*** (0.0343)	-0.3290*** (0.0603)	0.0493*** (0.0101)	0.0316*** (0.0112)
Industry (two-digit) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time (quarter) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	147,176	144,311	106,819	131,337	147,176	138,932	138,154
Within R ²	0.0699	0.0270	0.0281	0.0021	0.7818	0.0108	0.0797
Between R ²	0.5429	0.5098	0.2909	0.0433	0.7934	0.2384	0.3244
Overall R ²	0.4369	0.5235	0.1010	0.0055	0.7767	0.1207	0.2616

Note: *p<0.1; **p<0.05; ***p<0.01
Firm-clustered standard errors in parentheses.

Table 4: Subscription Model and Corporate Finance Outcome Variables Controlling for Cash Flow Volatility

	<i>Dependent variable:</i>						
	Cash / Assets	Inv. / Assets	RD-Adj OCF / Assets	Investment	Net Leverage	RD / Assets	CAPX / Assets
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Subscription (5+ 10-K mentions)	-0.0160** (0.0064)	-0.0026 (0.0035)	-0.0025* (0.0015)	0.0344* (0.0177)	0.0160** (0.0064)	-0.0002 (0.0008)	-0.0004 (0.0009)
Cash Flow Volatility	-0.0000 (0.0000)	0.0000*** (0.0000)	0.0000*** (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000** (0.0000)	0.0000*** (0.0000)
Size (Log Assets)	-0.0287*** (0.0041)	-0.0152*** (0.0020)	0.0054*** (0.0011)	0.0629*** (0.0068)	0.0287*** (0.0041)	-0.0059*** (0.0007)	0.0010** (0.0004)
Market-to-Book	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Profitability	-0.0000 (0.0000)	0.0000*** (0.0000)	0.0001 (0.0001)	-0.0000 (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
Book Leverage	-0.0533*** (0.0151)	-0.0070* (0.0039)	-0.0418*** (0.0115)	-0.0503** (0.0255)	1.0533*** (0.0151)	0.0024 (0.0026)	-0.0123*** (0.0030)
Constant	0.3380*** (0.0792)	0.2205*** (0.0548)	-0.0124* (0.0068)	0.8963*** (0.0884)	-0.3380*** (0.0792)	0.0392*** (0.0061)	0.0362*** (0.0065)
Industry (two-digit) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time (quarter) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	74,813	73,213	70,707	73,097	74,813	72,999	72,960
Within R ²	0.0523	0.0480	0.0298	0.0021	0.8160	0.0150	0.1272
Between R ²	0.4632	0.5608	0.2212	0.0433	0.7982	0.2208	0.3609
Overall R ²	0.3151	0.5391	0.0868	0.0055	0.8004	0.1652	0.2801

Note: *p<0.1; **p<0.05; ***p<0.01
Firm-clustered standard errors in parentheses.

Table 5: 6/17/24 Adobe Lawsuit: All 609 Subscription Firms

Day	CAR (Mean)	t-stat	p-value
-5	0.0011	0.53	0.598
-4	0.0046	1.60	0.109
-3	-0.0053	-1.57	0.117
-2	-0.0128	-3.00	0.003
-1	-0.0092	-1.94	0.053
0	-0.0179	-3.67	0.000
1	-0.0253	-4.85	0.000
2	-0.0202	-3.34	0.001
3	-0.0192	-3.05	0.002
4	-0.0186	-2.80	0.005
5	-0.0190	-2.73	0.007

Table 6: FTC Click-to-Cancel Rule: All Dates, All Subscription Firms

Day	CAR (Mean)	t-stat	p-value
-5	0.0009	0.80	0.422
-4	0.0039	2.60	0.009
-3	0.0100	3.00	0.003
-2	0.0101	2.79	0.005
-1	0.0119	3.30	0.001
0	0.0138	3.34	0.001
1	0.0122	2.87	0.004
2	0.0146	3.32	0.001
3	0.0153	3.36	0.001
4	0.0223	4.76	0.000
5	0.0244	5.07	0.000

Table 7: 10/16/24 FTC Click-to-Cancel Rule: Announcement Date, All Subscription Firms

Day	CAR (Mean)	t-stat	p-value
-5	0.0031	1.36	0.174
-4	0.0068	2.23	0.026
-3	0.0086	2.94	0.003
-2	0.0073	2.17	0.030
-1	0.0088	2.51	0.012
0	0.0107	2.71	0.007
1	0.0131	2.65	0.008
2	0.0217	3.36	0.001
3	0.0273	4.12	0.000
4	0.0335	4.43	0.000
5	0.0334	4.49	0.000

Table 8: FTC Click-to-Cancel Rule: All Dates, Newspapers

Day	CAR (Mean)	t-stat	p-value
-5	0.0019		
-4	-0.0084		
-3	-0.0085		
-2	-0.0179		
-1	-0.0166		
0	-0.0264		
1	-0.0327		
2	-0.0353		
3	-0.0385		
4	-0.0422		
5	-0.0388		

Table 9: 10/16/24 FTC Click-to-Cancel Rule: Announcement Date, Newspapers, CAR by firm

Day	CAR (Event Date)	t-stat	p-value
GCI	-0.1432		
NWSA	-0.0109		
NYT	-0.0341		
TRI	-0.0090		

Table 10: FTC Click-to-Cancel Rule: All Dates, SAAS

Day	CAR (Mean)	t-stat	p-value
-5	0.0007		
-4	0.0152		
-3	0.0256		
-2	0.0341		
-1	0.0342		
0	0.0308		
1	0.0290		
2	0.0296		
3	0.0320		
4	0.0478		
5	0.0504		

Table 11: 10/16/24 FTC Click-to-Cancel Rule: Announcement Date, SAAS Firms, CAR by Firm

Firm	CAR (Event Date)	t-stat	p-value
ADBE	-0.0098		
CRM	-0.0033		
CRWD	0.0197		
DDOG	-0.0176		
NOW	-0.0234		
OKTA	0.0120		
SNOW	0.0483		
TEAM	0.1558		
WDAY	0.0457		

Table 12: FTC Click-to-Cancel Rule: All Dates, Streaming Video on Demand (SVOD)

Day	CAR (Mean)	t-stat	p-value
-5	0.0014		
-4	0.0012		
-3	0.0013		
-2	-0.0011		
-1	0.0065		
0	0.0082		
1	0.0006		
2	0.0089		
3	0.0067		
4	0.0144		
5	0.0098		

Table 13: 10/16/24 FTC Click-to-Cancel Rule: Announcement Date, Streaming Video on Demand (SVOD), CAR by Firm

Firm	CAR (Event Date)	t-stat	p-value
CMCSA	0.0220		
DIS	0.0624		
FOXA	-0.0266		
NFLX	0.0305		
PARA	-0.0534		
ROKU	-0.0301		
WBD	-0.0458		

Table 14: Portfolios Sorted on Subscription Keywords

	Subscription Keywords				Differences	
	0	1-4	5-19	20+	5+ - 0	20+ - 0
Summary Statistics (n = 259 months)						
Percent of Observations	67.96%	19.18%	7.06%	5.80%		
Mean Excess Return	0.97%	0.91%	1.17%	1.00%	0.00%	-0.09%
	(3.55%)	(4.02%)	(4.52%)	(4.85%)	(2.58%)	(3.19%)
Six-Factor Alpha	0.33***	0.28**	0.44***	0.34**	-0.06	-0.11
	(0.06)	(0.11)	(0.15)	(0.16)	(0.14)	(0.18)
Fama-French Six-Factor Regressions (n = 259 months)						
Mkt - Rf	0.7934***	0.8501***	0.9354***	0.9174***	0.1296***	0.1259**
	(0.0203)	(0.0320)	(0.0448)	(0.0412)	(0.0341)	(0.0458)
HML	0.0981**	-0.0585	-0.2633***	-0.2050***	-0.3518***	-0.3058***
	(0.0384)	(0.0439)	(0.0610)	(0.0769)	(0.0634)	(0.0868)
SMB	-0.0293	-0.1047**	-0.1612**	-0.0697	-0.0889	-0.0362
	(0.0293)	(0.0457)	(0.0644)	(0.0923)	(0.0750)	(0.1009)
CMA	0.1701***	0.1642**	0.0998	-0.1564	-0.1699*	-0.3182**
	(0.0526)	(0.0701)	(0.0939)	(0.1141)	(0.0987)	(0.1342)
RMW	0.1275***	-0.0592	0.1044	-0.0694	-0.0924	-0.1937*
	(0.0436)	(0.0547)	(0.0751)	(0.1012)	(0.0867)	(0.1165)
Mom	0.0664***	0.0264	0.0235	-0.0093	-0.0593	-0.0762
	(0.0256)	(0.0266)	(0.0316)	(0.0425)	(0.0422)	(0.0566)
R^2	0.9342	0.8491	0.7638	0.7360	0.3145	0.2504
F -stat	305.59***	134.59***	87.77***	142.93***	21.75***	13.76***

Notes: The table reports summary statistics and coefficient estimates from Fama-French

six-factor regressions for portfolios sorted on subscription keyword mentions. Robust standard errors are shown in parentheses. Significance levels are denoted as *** $p < 0.01$,

** $p < 0.05$, and * $p < 0.10$. F -statistics indicate overall model significance.

Table 15: Cross-Sectional Characteristics Regressions on Monthly Excess Returns

	(1)	(2)
Subscription Dummy (5+)	-0.230*** (0.084)	
Subscription Keyword Count		-0.0022* (0.0013)
Market Beta	0.197*** (0.068)	0.200*** (0.068)
Investment	0.069 (0.048)	0.067 (0.048)
Profitability	0.058* (0.034)	0.058* (0.034)
Dividend-to-Equity	-0.011 (0.017)	-0.011 (0.017)
Log Book Equity	0.109*** (0.016)	0.107*** (0.016)
Constant	-0.646*** (0.128)	-0.654*** (0.128)
Observations	206,648	206,648
Number of Groups	2,087	2,087
Overall R^2	0.0017	0.0017
Between R^2	0.1192	0.1139

Robust standard errors clustered by firm (panel.id) in parentheses. Characteristics follow Koijen and Yogo (2019). All characteristics are lagged by one month. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 16: Subscription Model and Corporate Finance Outcome Variables (Without Industry Fixed Effects)

	<i>Dependent variable:</i>						
	Cash / Assets (1)	Inventory / Assets (2)	RD / OCF (3)	Investment (4)	Net Leverage (5)	RD / Assets (6)	CAPX / Assets (7)
Subscription Firm	-0.0135*** (0.0021)	0.0196*** (0.0023)	-0.0096*** (0.0020)	0.0567*** (0.0127)	0.0737*** (0.0113)	0.0009 (0.0009)	0.0018** (0.0009)
Size (Log Assets)	-0.0131*** (0.0013)	-0.0100*** (0.0013)	0.0105*** (0.0013)	-0.0040** (0.0018)	-0.0149*** (0.0012)	-0.0104*** (0.0014)	0.0002 (0.0004)
Market-to-Book	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Profitability	-0.0000 (0.0000)	0.0000 (0.0000)	0.0001*** (0.0000)	0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)	-0.0000 (0.0000)
Book Leverage	0.0235*** (0.0055)	0.0003 (0.0033)	-0.0396*** (0.0060)	-0.0535*** (0.0133)	0.5563*** (0.0065)	0.0082** (0.0041)	-0.0099*** (0.0018)
Constant							
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	No	No	No	No	No	No	No
Observations	147,176	144,311	106,819	131,337	147,176	138,932	138,154
Within R ²	0.0696	0.0270	0.0281	0.0020	0.7817	0.0108	0.0797
Between R ²	0.2951	0.0001	0.2615	0.0294	0.6594	0.1142	0.0002
Overall R ²	0.2195	0.0098	0.0799	0.0021	0.6886	0.0522	0.0302

Note:

*p<0.1; **p<0.05; ***p<0.01

Firm-clustered standard errors in parentheses.