

FREE CASH FLOW THEORY WITHOUT THE FREE CASH EMPHASIS

by

David A. Butz

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Department of Economics
University of California, Los Angeles
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David A. Butz
Department of Economics
University of California, Los Angeles
405 Hilgard Avenue
Los Angeles, California 90024
(213) 825-6838

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Abstract: This paper raises three related problems with Michael Jensen's (1986) hypothesis that agency problems surrounding free cash can explain many leveraged buyouts, takeovers, and recapitalizations. First, it questions the wisdom of focusing on free cash rather than a broader class of discretionary assets that could give rise to the same agency conflict. Second, it illustrates how curtailing such discretionary assets can aggravate these agency problems. Third and most important, debt may not effectively bond managerial promises to disgorge resources even where such action is warranted unless far more is issued than Jensen suggests. This paper argues that debt more often serves as a credible commitment to sell assets that have performed poorly, and it shows how this debt must be structured. This commitment works regardless of why the assets have not fared well — cash may or may not be involved.

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In 1986 Michael Jensen introduced a highly appealing and now widely cited explanation for leveraged takeovers and takeover defenses. He focused on the special agency problems surrounding "free cash," which he defined as corporate cash in excess of what is needed to finance all positive net present value projects. By definition management has no productive use for this cash, so it should distribute it to shareholders. But because management does not have appropriate incentives to maximize value, it instead uses the money for other purposes. Debt, said Jensen, can address this problem. Specifically, the firm can issue debt and pay out the proceeds to shareholders, ideally so that future interest and repayment obligations match the accrual of free cash. By doing so it forces management to commit free cash to service the debt.

At the end of his article Jensen proposed a second and related explanation. He suggested that in some severe cases the agency problem created by free cash flows could best be resolved by leveraging the firm so highly that it cannot avoid default except by cutting expansion programs and selling assets that are more valuable outside the firm. The process "results in a complete rethinking of the organizations' strategy and its structure (p. 328)." This theory differs from the first in two respects: management sells the assets generating these cash flows rather than merely paying them out as they accrue; and debts are repaid with the proceeds of these asset sales. Whereas in Jensen's first explanation high debts are permanent, in this one they are not.

Both explanations identify a potentially important source of restructuring gains and outline how firms can realize them. The empirical evidence is mixed, but strong support for the free cash flow hypotheses arises in particular industries, especially oil, and when free cash appears in conjunction with other agency problems.¹ Were it not so difficult to measure free cash, the evidence might be even stronger.²

Nonetheless, this paper takes issue with several aspects of Jensen's first explanation. First, it questions the wisdom of focusing so narrowly on free cash rather than a much broader class of discretionary assets. Cash may warrant special consideration as the most liquid and discretionary resource at management's disposal, but it is not the only discretionary resource. The free cash flow story does indeed make sense, but by restricting attention solely to free cash Jensen overlooks a potentially far wider problem.

Second, by arguing that the problem revolves fundamentally around cash, Jensen concludes that its resolution comes about simply by disgorging this cash. But if management can substitute other discretionary resources, then this action may have either little impact or unintended consequences. If it lacks access to cash, management may cut back on profitable investments rather than its own departures from value maximization. As a consequence, shareholders could be made worse off.

Finally and most important, debt as described in Jensen's first explanation may not effectively bond managerial promises to disgorge resources even where such action is warranted unless far more is issued than Jensen suggests. But if it does so, the firm may find itself indefinitely on the brink of bankruptcy. The rise in expected bankruptcy costs and the other agency costs of debt may often outweigh any reduction in the agency costs of free cash flow.

This paper argues instead that Jensen's second free cash flow hypothesis — minus the narrow free cash emphasis — best explains leveraged buyouts and debt restructurings because it cuts to the heart of the agency problem. To bond management's promises to increase value the firm sets a minimum acceptable target and a timetable for reaching it. It issues "short-term" debt and pays out the proceeds and in the process reduces net worth below zero. If

management does not respond by increasing the firm's value above zero by the time the debt matures, the firm defaults. Faced with a well-defined objective and a binding deadline, management must sell undervalued assets and scrap unprofitable projects to raise the firm's value quickly.

Section I questions the distinction between free cash and other discretionary assets. Section II shows why debt may not commit management to disgorge free cash flows as they arise. Section III shows how debt can commit management to sell assets. A discussion and conclusion follow.

I. FREE CASH VERSUS OTHER DISCRETIONARY ASSETS

Managerial departures from value maximization can take many forms, including negative net present value projects, overconsumption of amenities, and largess toward unions. Though management can tap free cash flows to finance these activities, it could also divert non-free cash or non-cash resources previously employed in valuable pursuits. To the extent that management engages in any given level of shirking, shareholders prefer to finance it as cheaply as possible — using free cash. Reducing managerial access to free cash could therefore aggravate agency problems.

Consider an example. A firm's cost of capital equals 20% but management discounts future returns at only a 10% rate. Management begins with \$10 million in cash and considers two ventures, A and B. Each involves an initial investment of \$5 million. Project A pays \$800,000 in perpetuity, so management values the post-investment returns at \$8 million and shareholders value them at \$4 million. Project B pays \$2 million per year for five years and nothing thereafter. Management values Project B's post-investment returns at \$7.6 million and shareholders value them at \$6 million.

With \$10 million at its disposal management can pursue both projects, and since it values both projects' post-investment returns at more than \$5 million it does so. Shareholders, in contrast, want management to pursue only Project B. But they cannot resolve the agency problems by forcing management to disgorge cash, since management prefers Project A to B. If management finds itself with less than \$10 million and a choice between the two projects, it selects the unprofitable venture (A) and forgoes the profitable one (B).

Since free cash represents the cheapest way to finance any fixed amount of shirking, any case for emphasizing it must rest upon the prospect that management can use cash to depart from value maximization on a scale not otherwise possible. Jensen's argument rests critically on the assumption that with an abundance of internally generated cash management can shirk more easily than if its actions were subjected to the scrutiny of outside capital markets:³

Payouts to shareholders reduce the resources under managers' control, thereby reducing managers' power, and making it more likely that they will incur the monitoring of capital markets which occurs when the firm must obtain new capital. Financing projects internally avoids this monitoring and the possibility that the funds will be unavailable or available only at high explicit prices (Jensen 1986 p.323).

To illustrate, suppose in the previous example that outsiders know all about Project B but do not know Project A's payoffs. They know, however, that when discounted at 20% its payoffs could not exceed \$6.0 million. If management finds itself with less than the requisite \$10 million needed to fund both projects, it must choose between three unpleasant options: choose A instead of B and thereby expose its non-value maximizing objectives; sell additional claims on the firm and thereby subject itself to the scrutiny of

outside capital markets — which would somehow reject Plan A or make it prohibitively expensive for management to pursue; or proceed only with Project B. Faced with these choices management acts in shareholders' best interests.

Yet this example makes three questionable assumptions. First, it assumes that management looks first at its free cash and only then makes its investment decisions. In practice, though, the causality could as easily be reversed: management may decide which projects to undertake and only then how to finance them. Even if management and shareholders have the same rank preferences for investment projects, shareholders might approve of the decision to retain cash if the alternative is to raise money through more expensive sources of internal capital, including a cut in the dividend, a sale-lease-back of corporate assets, or a variety of other possibilities. To put this differently, a payout of the sort Jensen describes works only if it indeed makes it more likely that managers will have to turn to outside capital markets to fund all new projects and thereby subject themselves to the scrutiny these markets impose. If it does not do so, then this payout could compound the agency problem.

Second, this argument assumes that management must undergo greater scrutiny from potential buyers of new claims on the firm than from investors with claims already outstanding. No effort has been made to measure directly the degree to which new claimants monitor more rigorously than existing claimants, so there is no empirical estimate of how much monitoring rises when firms raise outside capital.⁴ The added scrutiny that comes from the sale of new claims may serve only a weak disciplinary role, and if so Jensen's argument is not compelling.

Third and most important here, Jensen identifies no unique role for free cash. Other resources could pose similar problems. To illustrate, consider a second hypothetical. Suppose a company owns large tracts of forest land.⁵ It harvests lumber from these tracts and distributes all proceeds through a \$100 million annual dividend payout. As such, it has no free cash. Yet management has discretion over the rate at which it harvests lumber, and perhaps because of its concern for the environment it cuts fewer trees than strict profit maximization would dictate. With more aggressive harvesting the firm could generate a \$200 million profit, so despite the absence of cash discretionary resources give rise to managerial shirking.

In short, free cash may sometimes be sufficient for the agency problems Jensen describes, but it is by no means necessary. Jensen's hypothesis could apply in settings he did not envision and in this respect is far more general than originally explicated. Although cash is among the most discretionary of assets, it is also the most visible; once identified it is among the easiest resources for outsiders to track (see Alchian and Woodward, 1988). Ironically, as the most discretionary and visible of resources free cash may therefore warrant some special attention for the monitoring problems it poses, but it is by no means the only discretionary asset and it is a mistake to focus so narrowly on it.

The next section elaborates on these points and shows that the agency problems posed by free cash — and other discretionary resources — are not resolved as straightforwardly as Jensen's first free cash flow model suggests. With the acknowledgement that managerial discretion can extend well beyond free cash, debt does not constrain managerial behavior unless it is issued in far greater quantities than previously believed.

II. DEBT AND DISCRETION

Consider a firm that for the moment operates in an environment with no uncertainty. The firm has gross time- t cash balances of M_t . After paying its creditors B_t and its shareholders D_t , its net cash balances are

$$(1) \quad C_t = M_t - B_t - D_t.$$

Suppose its profits depend upon the net cash balances management has available to invest. In this case, suppose management could increase future discounted profits by adopting a new policy whereby future net cash balances would be reduced. Formally, management could henceforth retain cash balances of C'_t, C'_{t+1}, \dots , where $C'_{t+s} \leq C_{t+s}$ for all $s \geq 0$ and $C'_{t+s} < C_{t+s}$ for some $s \geq 0$, and by doing so it could raise its future profits. Let M'_{t+s} denote the gross cash balances generated under this alternate plan.

By equation (1) the firm can reset its net cash balances by adjusting either its dividend or its payments to creditors. Suppose it elects to change only the dividend, so that its payments to creditors are $B'_{t+s} = B_{t+s}$. Then it follows from equation (1) that

$$(2) \quad D'_{t+s} = D_{t+s} + (C_{t+s} - C'_{t+s}) + (M'_{t+s} - M_{t+s}) \quad \text{for all } s \geq 0.$$

Management adjusts the dividend to reflect its intention to lower net cash balances from C_{t+s} to C'_{t+s} and to reflect the effect this has on gross cash balances. Hence, excess free cash is disgorged quite simply.

Unfortunately, says Jensen, an announced change in the dividend policy lacks credibility. Since management can reset its dividend policy each period, if it subsequently wants to return to the original status quo it can do so merely by cancelling this increase. And if the original status quo maximizes

managerial utility, management may indeed renege. Jensen argues that because management has no discretion over debt payments, the firm can establish a far more credible change in its cash flows by issuing debt and distributing the proceeds to shareholders. Formally, management makes no change in its dividend policy, so that $D'_{t+s} = D_{t+s}$ for all $s \geq 0$, but the firm borrows an amount equal to R , where

$$(3) \quad R = \sum_{s=0}^{\infty} \beta^s [(C_{t+s} - C'_{t+s}) + (M'_{t+s} - M_{t+s})],$$

and β is the discount rate. It then distributes this to its shareholders and arranges to repay the interest and principal such that

$$(4) \quad B'_{t+s} = B_{t+s} + (C_{t+s} - C'_{t+s}) + (M'_{t+s} - M_{t+s}) \text{ for all } s \geq 0.$$

This results in net cash flows of C'_{t+s} for all $s \geq 0$, and higher profits. The only difference between the two arrangements, aside from the added credibility of the latter, is that the debt issue allows shareholders to take the increased profits immediately via the proceeds of the debt issue. Their subsequent dividend payments remain unchanged.

Despite its surface plausibility, this argument contains a fatal flaw. Either management can renege upon its dividend policy or it cannot. If it cannot renege, then it can commit to pay out excess discretionary resources by raising the dividend as described in equation (1). It needs no new debt. If it can renege, then a debt issue of the sort described in equations (3) and (4) does not provide a credible means to reduce net cash flows, because management can reduce the dividend below D_{t+s} and restore some or all of the funds it needs to pursue unprofitable investments. In particular, it can subsequently adopt a dividend policy represented as follows:

$$(5) \quad D''_{t+s} = D_{t+s} - [(C_{t+s} - C'_{t+s}) + (M'_{t+s} - M_{t+s})].$$

It follows immediately from equations (4) and (5) that with a dividend of D''_{t+s} management once again has C_{t+s} at its disposal even though it must distribute more cash than before to its creditors. In short, it can "undo" any financial policy by cutting the dividend and restoring its cash balances. In the lumber company example of Section I, increased debt does little good if management can tap the \$100 million dividend to pay its creditors instead of cutting more trees.

Management's opportunity set has not changed because of the added debt, so if its utility was maximized under the initial status quo (B_{t+s} and D_{t+s}), then it is also maximized under this new one (B'_{t+s} and D''_{t+s}). The firm's financial policy is irrelevant here for much the same reason it is in other models (e.g., Modigliani and Miller (1958) and Stiglitz (1969)).

The first free cash flow story can be salvaged, but only if the firm eliminates the dividend. In particular, at time t the firm must announce that henceforth it will pay no regular dividend. Instead it borrows

$$(6) \quad R' = R + \sum_{s=0}^{\infty} \beta^s D_{t+s}$$

and distributes the proceeds to shareholders in one lump sum. The firm borrows against both the excess net cash flows and all future dividends and then schedules its interest expense and principal repayment such that

$$(7) \quad B''_{t+s} = B_{t+s} + D_{t+s} \quad \text{for all } s \geq 0.$$

Once they receive the proceeds of the debt issue, therefore, shareholders have no further stake in the firm. Likewise, if management can turn to internal sources other than the dividend to replenish its cash balances, then

these too may need to be cut and the firm might then have to borrow even more than in equation (6).

Whereas in general such actions appear too extreme, this sort of managerial emasculation may have made perfect sense for oil companies during the 1980s. All had bleak domestic profit opportunities and abysmal diversification records and there was little hope for any significant change in their investment prospects. As such, there was little danger that management would forego profitable projects in favor of unprofitable ones. The objective of the leveraged restructurings was to cut off nearly all avenues for investing and to force management to end many projects either planned or under way. Many assets were put into master limited partnerships with specific provisions that the proceeds would be passed directly through to shareholders.

The preceding argument would proceed entirely unchanged with the introduction of uncertainty, except that all variables would be state-contingent. Of course, the prospect of bankruptcy could alter the conclusions — again, in much the same fashion as it does to other propositions regarding the relevance of financial policy — but this only points out that it is at least as much the threat of bankruptcy as any scrutiny by outside capital markets that disciplines management in Jensen's paradigm.⁶

The next section outlines a more likely story in which a firm's debt issue serves not to adjust cash flows available for managerial investment projects, but rather as a means to provide both a minimum acceptable firm value and a binding deadline for achieving it.

III. DEBT AND ASSET SALES

Almost as an afterthought, Jensen also proposed a variation on the free cash flow hypothesis:

The debt created by a hostile takeover (or takeover defense) of a firm suffering severe agency costs of free cash flow is often not permanent. In these situations, leveraging the firm so highly that it cannot continue to exist in its old form generates benefits. It creates the crisis to motivate cuts in expansions programs and the sale of those divisions which are more valuable outside the firm. The proceeds are used to reduce debt to a more normal or permanent level (Jensen 1986 p. 328).

This explanation — minus the narrow free cash emphasis — motivates the following discussion.

A firm owns N independent investment projects. Under incumbent management, Project n generates expected discounted returns from time t onward of X_t^n , where $n = 1, 2, \dots, N$. If plans are initiated at time t , then Project n could be sold off at time $t+r_n$ for a price of $Y_{t+r_n}^n$, but it could not be sold off at full value any time sooner. In other words, if $r_n \geq 1$, then Project n is not perfectly liquid. Let $Y_t^{n*} = \beta^{r_n} E_t Y_{t+r_n}^n$; let $V_t = \sum_{n=1}^N X_t^n$ and let $V_t^* = \sum_{n=1}^N \max[X_t^n, Y_t^{n*}]$, where it is assumed that $V_t^* \gg V_t$. Hence, V_t denotes the expected discounted return on all of the firm's investment projects under the status quo and V_t^* denotes the expected return if incumbent management divests all projects that would be worth more to other firms. Note that incumbent management could achieve values intermediate between V_t and V_t^* by selling off some but not all of the projects that are worth more to other firms.

By assumption management prefers to retain any and all investment projects that could be sold off but is willing to relinquish control over some projects to retain control of the remainder. In other words, it will sell projects if the alternative is a takeover. Suppose atomistic shareholders own a fraction $1 - \alpha > 0.5$ of the firm's equity and that a single large shareholder, hereafter L , owns the remaining α and seeks to maximize his expected wealth. For simplicity, all information is common knowledge. By taking control L could

raise the firm's value from V_t to V_t^* , but because small shareholders would refuse to sell out for anything less than their shares' expected post-takeover value (Grossman and Hart 1980), L can reap only $\alpha(V_t^* - V_t)$ from its efforts. Assume, however, that $\alpha(V_t^* - V_t) > C$, where C denotes L's takeover costs, so that under the status quo a takeover would raise L's expected wealth.

To retain control, management must initiate enough asset sales such that the firm's expected returns rise above V_t^C , where $\alpha(V_t^* - V_t^C) = C$. Solving for V_t^C gives $V_t^C = V_t^* - (C/\alpha)$. Because these asset sales take time, however, L may have no assurance that management will follow through by actually selling assets when the time comes. To avoid a takeover, management must initiate these asset sales and commit to follow through as expeditiously as possible.

If properly structured, debt can provide this commitment. Suppose the firm issues $(V_t^C + \delta)$ in debt and distributes the proceeds to shareholders, where δ is an arbitrarily small positive number. Suppose too that it arranges to pay the accrued interest each period on all outstanding debt and to repay principle of Y_t^{i*} at time $t + \tau_i$, where Project i is among the assets slated for sale. Finally, suppose the debt has strict covenants making it senior to any subsequent claims the firm might issue.

The firm then has liabilities of $V_t^C + \delta$ and expected returns under the status quo of $V_t < V_t^C + \delta$. Unless management sells projects as quickly as possible, the firm faces the prospect of default once the debt matures. It could conceivably defer action in the hope that the projects' expected values would rise, but some action would still be necessary to meet principal repayment obligations as they come due. And if they come due quickly there may be little hope that the projects could appreciate in time to render their sale unnecessary.

Moreover, unless the projects could rise markedly in value, at best the delay could mean fewer asset sales than otherwise and at worst could force management to divest more than it originally planned. And if repayment comes quickly, management would stand to gain very little from a dividend cut, since this would provide management with only minimal resources to service its debts. By reducing the firm's net worth below zero and setting its debt maturities appropriately, incumbent management provides itself with a minimum acceptable increase in the firm's value and binding deadlines for achieving its stated goals.

By reducing net worth below zero and making this debt senior to other claims, any new claims would be worthless and command a zero price unless and until management completes its promised asset sales. Consequently, management cannot avoid default by issuing new debt or equity. Maturities should be set so that management has just enough time to find buyers willing to pay as much as possible for the firm's assets.

With debt levels so high, agency costs provide a second motive for short maturities. Strict bond covenants and restricted access to external capital markets make it extremely difficult for management to finance profitable new projects. Also, management has incentives to increase the risks involved in existing projects — perhaps even with shareholders' approval (see Jensen and Meckling 1976). Creditors anticipate this and require the firm to repay quickly or pay high interest rates to compensate (or both).

Default risk depends upon a variety of factors. First, all else equal this risk is lower where the proceeds from asset sales are highly predictable. Second, default risk is lower when takeover costs are high or where L's initial ownership stake is low. To see this, note that incumbent manage-

ment borrows no more than it must to preempt L's takeover threat. In particular, it borrows $V_t^C + \delta$, where $V_t^C = V_t^* - (C/\alpha)$. When C is high or α low, management has considerable margin for error. If asset values fall, management can avoid default by selling more assets than it had originally planned. In contrast, where C is low and α high, $V_t^C \approx V_t^*$ and management has nowhere to turn if events conspire against it. Under such circumstances potential creditors should be reluctant to lend management enough to preempt a takeover. Third, even where default risk is high debt may be practical if bankruptcy costs are low.

Consequently, leveraged buyouts and recapitalizations would be most likely in mature industries where assets are relatively liquid and where their values fluctuate relatively little. They would also be likely where risks can be hedged using insurance or futures markets; among firms where management is relatively more entrenched and where ownership is relatively (though not completely) diffuse; and among firms and in industries with low bankruptcy costs (e.g., where tangible assets can be used as collateral). Significantly, many firms that have gone through leveraged buyouts and recapitalizations fit this profile.

IV. DISCUSSION

Of Jensen's two motives for leveraged buyouts and recapitalizations, one addresses the agency problem indirectly and the other cuts to the heart of the problem. The first motive is to curtail excess discretionary resources and thereby curb non-value maximizing behavior. This works imperfectly for two reasons: management may respond by cutting back on profitable rather than unprofitable activities and it may cut the dividend or turn to other internal means to replenish its discretionary resources. Significantly, free cash

does not have to be involved and its presence in this agency conflict does not necessarily imply causality.

In the second motive management must sell assets and raise the firm's value to avoid default. It faces an explicit objective and a binding deadline(s) and if the assets targeted for sale are reasonably liquid then it has few opportunities to avoid either one. Once again, free cash may or may not be involved.

Both of Jensen's explanations generate testable implications. The first hypothesis — that debt bonds managerial promises to disgorge excess discretionary resources as they accrue — implies a zero dividend and permanently high debt. Since it has no implications for asset sales, we should not a priori expect any. The second hypothesis — that debt bonds managerial promises to sell or scrap underperforming assets — implies little or nothing about the dividend, so we should expect few changes. Management should quickly sell assets and debt should fall accordingly. This hypothesis even predicts that the debt will take on certain characteristics (e.g., short-term maturities or sinking funds).

Of course one explanation does not preclude the other. In the oil industry, for example, where Jensen's free cash flow story has the most empirical support, high but falling oil prices in the 1980s generated huge cash flows that endowed management with tremendous discretion — discretion that it neither needed nor used wisely. The firm's owners sought to reduce managerial discretion and debt as employed in Jensen's first explanation provided one vehicle for doing so. At the same time, though, these oil companies also sold off billions in assets and cancelled many other expensive projects to repay principal. In short, debt remained at permanently higher levels as

predicted by Jensen's first explanation, but the asset sales and repayment of significant principal are also consistent with his second explanation.

The empirical record provides mixed evidence on the importance of free cash flows. Bhagat, Shleifer, and Vishny (1990), for example, conclude for their 1984 - 1986 sample of firms that while the free cash flow story seems plausible for the oil industry, there is little evidence of its effects elsewhere.⁷ Lehn and Poulsen (1989) find support for Jensen's hypothesis that free cash flows pose special agency problems — but primarily over specific time periods and under certain conditions. This evidence suggests that while the discretion afforded by free cash may indeed be one source of agency problems, far more is happening. Lehn and Poulsen's results are especially interesting in this regard. In particular, cash flows held little significance in explaining premiums paid in going private transactions when management owned a substantial equity stake prior to the transaction; and it was highly significant when management had only a small stake. This indicates that excess cash is important primarily in conjunction with preexisting agency conflicts — and it leaves open the possibility that undistributed cash flows are a consequence of agency conflicts rather than a cause.

The empirical record also confirms the importance of asset sales to repay debts in leveraged buyouts, hostile takeovers, and leveraged recaps. For example, Bhagat, et al. (1990) conclude that "it is absolutely clear from these data that selling of divisions is one of the most pervasive consequences of hostile takeovers (p.35)", and in many cases these selloffs result in a liquidation or near-liquidation of the target. They find little difference between asset sales in successful and unsuccessful takeovers, suggesting that a change in control is not the motivating force behind these actions: whether

incumbent management retains control or loses it to others, the winning management team must raise value by selling assets.

Finally, Mitchell and Lehn (1990) argue that one major motive for takeovers in the 1980s was the restoration of stockholder value that had been lost because of the targets' prior misguided acquisition strategies. They examine acquiring firms, some of which later became targets themselves and some of which did not. Among those firms that later became targets, Mitchell and Lehn found that stock prices declined significantly (on average by over three percent) during the 45-day period surrounding the announcement of acquisitions. And among those firms that did not later become targets, stock prices increased significantly (and by roughly the same amount) upon the announcement of acquisitions. The more negative the market's response to an acquisition, the more likely the acquiring firm was to subsequently become a target. Finally, over forty percent of the acquisitions by companies that eventually became targets were later divested, versus only nine percent for firms that did not become targets. All of this evidence further confirms that control contests (and presumably measures to preempt these contests) are often motivated by the desire to sell off underperforming assets — whether or not their purchase was financed with cash and regardless of whether or not future cash flows would be significant.

Summarizing, the evidence seems to indicate that Jensen's cash flow story does indeed make sense. Over specific time periods, under certain conditions, and in some industries excess cash flows are associated with leveraged buyouts and recapitalizations and with hostile takeover bids. But this same evidence is also consistent with the argument forwarded here that these transactions are far more often structured to force management to di-

vest assets acquired in the past rather than to disgorge cash flows as they accrue in the future. Hence, Jensen's second explanation for debt-financed transactions of this sort has greater empirical support than his first explanation. Finally, the evidence is also consistent with the argument that while excess free cash may sometimes be sufficient to give rise to the agency problems that underly these transactions, it is not necessary. Other discretionary resources could also be involved, and as such Jensen's narrow focus on cash is not warranted.

IV. CONCLUSIONS

This paper holds both good news and bad news for Jensen's free cash flow hypotheses. The bad news is that while free cash may be important in specific settings, particularly in the oil industry, the nearly exclusive attention it receives is not warranted and the presence of free cash in situations where management shirks in no way implies either that it causes this shirking or that shirking would abate if management could commit to pay it out. Bluntly speaking, Jensen's free cash flow theories have little specifically to do with free cash. As such, the debt restructuring plan to which he devotes nearly all of his attention also falters.

The good news is that Jensen's second explanation for debt restructurings — when stripped of its narrow free cash emphasis — applies far more widely than his original exposition suggests. This paper clarifies and refines this explanation and demonstrates precisely how debt commits management to sell or scrap poorly performing assets. The empirical evidence suggests that this broader perspective is indeed warranted.

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ENDNOTES

¹For example, see Lehn and Poulsen (1989).

²To measure free cash it is necessary to know how many positive net present value projects management has at its disposal and how much cash these will require. This is obviously difficult to ascertain. Moreover, if simple statistical procedures could accurately measure free cash, then firms could easily remedy agency conflicts by amending managerial contracts to create appropriate incentives to disgorge it. Consequently, empirical tests must take an indirect approach using total cash flow, cash plus marketable securities, etc., as a noisy proxy.

³Similar arguments have been forwarded by Rozeff (1982) and Easterbrook (1984).

⁴Moreover, there is ample evidence that existing claimants rigorously monitor managerial actions. In addition to many works corroborating the efficient markets hypothesis, Mitchell and Lehn (1989) provide evidence in connection with their tests of the free cash flow model suggesting that existing claimants recognize bad acquisitions, which they argue are an important manifestation of free cash agency problems.

⁵This example is inspired by Pacific Lumber, discussed by Bhagat, Shleifer and Vishny (1990) in relation to its similarities to Jensen's free cash flow story.

⁶In addition, without bankruptcy risk there would appear to be no disciplinary role for outside capital markets, since new creditors would have no reason either to deny the firm credit or to make it prohibitively expensive. In short, the scrutiny of outside capital markets requires at minimum that debt is issued in quantities sufficient to create a tangible increase in default risk.

⁷To make the point that agency problems can arise whatever the type of discretionary asset, it is worth pointing out that Bhagat, Shleifer and Vishny discuss the timber industry at some length. In these industries management had the discretion to cut trees and market the timber at various rates, and chose to do so very slowly. Market conditions dictated otherwise, and hostile takeovers motivated management to disgorge these assets by cutting the trees, selling the timber and distributing the proceeds to shareholders. They even draw the analogy between this timber and free cash.