Financing, fire sales, and the stockholder wealth effects of asset divestiture announcements

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Abstract

We examine the impact of financial distress conditions at the individual firm level, the operating industry level, and economy-wide, on the stock price reaction to divestment announcements. This allows us to isolate distinct fire sale and financing theoretical explanations of asset divestments. We find that abnormal returns are significantly lower when firms divest assets during periods of industry-wide distress. During these periods the natural buyers of the divested assets are likely to have liquidity constraints, and so selling firms receive a lower price (Shleifer and Vishny, 1992). Fire sale effects from divestments are driven by financially constrained firms, firms selling core assets, small firms, and increase with deal size. We find some support for the financing explanation of the stock price response to divestments during periods of overlapping firm-level and economy-wide financial distress conditions, suggesting that divesting assets reduce the expected value of bankruptcy costs for selling firms under these conditions.

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1. Introduction

The evidence that activity in the market for asset divestitures, and control of corporate assets more generally, varies significantly over time and across industries is one of the most consistent in corporate finance research.[1] Time-series variation in activity can arise as a result of changes in the cost structure of an industry, changes in the relative valuation of bidder and target firms, and as a result of financial distress conditions, which are the focus of this study (Harford, 2005; Maksimovic and Phillips, 1998; Mitchell and Mulherin, 1996).

There are two main competing financial distress related hypotheses on the stock price reaction to asset divestments. The financing hypothesis proposes a positive stock price response to the divestment announcement, given the proceeds of the sale can reduce the expected costs of bankruptcy (e.g. Asquith et al., 1994; Lang et al., 1995). Under this theory, firms choose to sell assets when divestments represent a lower cost source of financing than raising debt or equity and the cash injection to the firm has a higher present value than retaining control of the divested assets. The literature on financing benefits traditionally focuses on asset sales by divestors experiencing financial distress at the individual firm-level (e.g. Ofek, 1993; Denis and Shome, 2005).

An alternative view is that when distress conditions impact on many firms simultaneously a negative stock price reaction to divestments is expected. For example, when distress conditions impact on all firms in an industry, the highest potential bidders are less likely to be in a position to acquire the divested assets, which increases the likelihood of asset purchases at distressed prices by non-industry acquirers. We refer to this as the fire sale explanation of divestments where distressed firms under pressure from creditors are forced to sell assets at a substantial discount to their fundamental value (Shleifer and Vishny, 1992). Empirical tests of this theory have traditionally focused on industry-wide distress rather than firm or economy-wide distress.

[1] See Duchin and Schmidt (2013), Mitchell and Mulherin (1996), and Mulherin and Boone (2000).

In this study we examine how the market reaction to announcements of asset divestments varies with firm-level, industry-wide, and economy-wide financial distress conditions to allow us to isolate the distinct theoretical predictions of these two models. The two divestment reaction theories have not typically focused on the impact of economy-wide distress conditions on the price received, and therefore the stock price response to divestment announcements is less examined and more ambiguous. As with industry-wide distress, economy-wide distress will lead to a reduction in asset value given lower current and expected future profitability from the firm's assets (Shleifer and Vishny, 1992). However, financing benefits can still accrue to divesting firms when there are a sufficient number of potential acquirers and the theories make distinct predictions regarding divestment of core and non-core assets that vary between industry-wide and economy-wide distress.

We propose that financial distress conditions facing the divesting firm, external market conditions, and the resulting availability of potential buyers for the divested assets are key determinants of the stock price response to divestment announcements. The financing hypothesis can explain a positive market reaction to divestments when there are sufficient high value buyers of the divested asset. However, when an increasing number firms seek to sell off assets at precisely the point when liquidity constrains are concentrated amongst the natural buyers of the divested assets the divesting firm is forced to either postpone the sale or accept a bid below the fundamental value of the assets. Under such conditions, the fire sales hypothesis predicts a lower stock price response to divestment announcements. Fire sale discounts are expected to be greatest when firms sell core assets to non-industry acquirers, who are identified as low value users of the divested assets in the fire sale literature (Shleifer and Vishny, 1992).

These conflicting arguments on fire sale costs and financing benefits and giving full consideration of the impact of different distress conditions on these theories motivates our paper. We aim to identify distinct periods of firm-level, industry-wide, and economy-wide financial distress

conditions, and periods when they overlap, to better isolate individual divestments most likely to be subject to fire sale costs and financing benefits. We argue that it is important to accurately define financial distress as either one of firm-level, industry- and economy-wide or combinations of them. Otherwise it is difficult to accurately identify which of these effects will be more dominant in explaining the stock price response to asset divestments.

A number of studies have empirically confirmed the presence of fire sale discounts for small samples of homogeneous asset sales during periods of industry-wide distress.[2] We extend this evidence for a large sample of heterogeneous asset divestments, and importantly across a range of divesting firm characteristics and financial distress conditions.[3] Borisova et al. (2013) point out that the opaque nature of the bidding process for divested assets increases the importance of firm-level and economy-wide factors in understanding the stock price reaction to divestment announcements. Therefore we examine firm-level and transaction characteristics, and how they vary across our three financial distress conditions to influence the stock price response to divestment announcements.

We examine these issues through an event study analysis of the stock price reaction to asset divestment announcements for 10,718 sales by non-financial UK firms from 1988 to 2009, comparing the reaction to divestments by firms during our three definitions of distress to non-distressed (healthy) firms. This sample period allows us to isolate specific distress conditions as it covers two recessions in 1990/91 and 2008/09, the stock market crashes associated with media and tech stocks in 2001 and the global financial crisis in 2008, and significant variation in industry-wide and firm-level distress conditions.

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[2] For example, for commercial aircraft (Benmelech and Bergman 2008; Gavazza, 2010), contract drilling equipment (Kim, 1998), real estate (Campbell et al., 2011), automatic bankruptcy auctions (Eckbo and Thorburn, 2008), and mutual fund withdrawals (Coval and Stafford, 2007)

[3] Borisova et al. (2013) argue that in a large heterogeneous sample, examining abnormal returns for selling firms surrounding the divestment announcement serves as an indicator of the value received. This circumvents the difficulties in estimating the intrinsic value of divested assets across a large sample of unlisted assets.

Our study contributes to research on financial distress and asset divestments in two key areas. First, we directly test competing financing and fire sale explanations that lead to differing predictions on the stock price reaction to divestment announcements and by more precisely defining conditions of financial distress under which each effect is likely to be dominant. The literature has defined distress using a number of firm-level measures (Clayton and Reisel, 2013; John et al., 1992), industry-wide measures (Acharya et al., 2007; Schlingemann et al., 2002), economy-wide measures (Campbell et al., 2008; Kahl, 2002), and combinations thereof. However, to the best of our knowledge this is the first paper to examine how the stock price response to divestment announcements varies with each set of distress conditions in isolation, and also their interaction.

Second, we extend prior literature on fire sale conditions to a larger, more heterogeneous, group of divesting firms, industries, and divested assets. Doing so allows us to exploit variation in distress and non-distressed conditions, and across divesting firm and deal characteristics, to directly compare investor perceptions of divestment announcements across financial distress conditions.

We provide empirical evidence that divestments made during periods of industry-wide distress, commonly associated with fire sale discounts, elicit a significantly lower stock price response. Shleifer and Vishny (1992) argue that under such conditions assets are more likely to be sold to low value non-industry users that will pay a lower purchase price. However, firm-level distress mitigates the lower response for industry-wide distressed sellers. These results suggest that fire sale conditions prevail when firms divest assets during periods of industry-wide distress, but that the financing benefits at the firm level can offset the fire sale discount.

Our examination of asset divestments during fire sale conditions highlights firm and deal characteristics that drive the stock price reaction to divestment announcements. Fire sale costs are restricted to the following sub-samples of divesting firms: (i) financially constrained firms with limited debt capacity who are likely to have been forced to divest under pressure from creditors, (ii)

firms specifically selling the core assets expected to suffer liquidity discounts, (iii) firms selling assets to non-industry acquirers that may require bigger liquidity discounts to purchase the divested assets, and (iv) small firms expected to have limited access to external capital market funding as an alternative to divesting assets. Fire sale costs increase with the relative size of the divested asset, again suggesting liquidity discounts for the sale of larger assets.

We find evidence in support of the financing hypothesis that asset sales are more beneficial to firm stockholders during periods of overlapping firm-level and economy-wide distress. We find that divested assets are more likely to be purchased by non-industry acquirers during economy-wide distress periods. Financing benefits to asset divestments during periods of economy-wide distress reflect imperfect correlation of distress conditions across industries and the availability of non-distressed acquiring firms outside of the divesting firms' industry. These effects are greatest when the divesting firm simultaneously experiences financial distress and/or is likely to be facing financial constraints in accessing external capital and the divested asset are purchased by acquirers operating in a different industry.

Collectively, these findings highlight the importance of precisely defining financial distress conditions for understanding investor perceptions of restructuring transactions. Our findings also highlight that prior evidence on the role of financial distress conditions in the market response to asset divestments can under or overstate the financing benefits and fire sale costs of divestments depending on the relative frequency of overlapping distress conditions during the sample period.

The remainder of this paper is structured as follows. In Section 2 we summarize prior literature on financial distress conditions and the stock price reaction to asset divestments and develop our empirical hypotheses. Section 3 outlines sample construction, variable definitions and research method. Section 4 presents our empirical findings and Section 5 concludes.

2. Theoretical background and hypothesis development

Empirical research on asset divestments finds that, on average, asset sales are associated with significant increases in stockholder wealth. A positive response is more often observed when the divestment is associated with an improved focus on core assets of the selling firm (John and Ofek, 1995) and the cash proceeds are used to pay-off debt holders rather than retained within the firm (Bates, 2005; Lang et al., 1995).

In this paper we focus specifically on firms experiencing financial distress who raise cash through asset sales. This is important as in non-distressed conditions the market for the divested asset could be liquid and buyers easy to find for the divesting firm and so they are able to sell the assets for a price close to the fundamental value (Schlingemann et al., 2002; Shleifer and Vishny, 1992). We expect the stock price response to differ for distressed firms and the direction of this difference to reflect competing financing and fire sales effects.

Financing theories of asset sales propose that divestments allow the selling firm to obtain access to external financing that can otherwise be difficult, especially if the firm is experiencing financial distress. Asset sales can reduce the direct and indirect costs of bankruptcy where the cash received from the disposal reduces the probability of bankruptcy and the sale price achieved is close to the fundamental value of the asset. In such cases a positive stock price response to divestment announcements can be expected when the divestor is experiencing firm-level financial distress because the divestment represents good news about the price received for the asset (Lang et al., 1995) and the proceeds can be used to reduce the probability of bankruptcy (Lasfer et al., 1996).

The fire sale explanation of divestments suggests that a need to finance liabilities falling due forces firms to sell assets in illiquid markets (Shleifer and Vishny, 1992, 2011). As such, the value received for asset sales is expected to be lower than during non-distressed periods for two reasons: (i) the present value of cash flows generated by the asset will decline with industry- and economy-

wide conditions and (ii) even at this lower fundamental value, sellers must offer a liquidity discount to induce low-value users to bid for the asset. During fire sale conditions, the stock price response to divestment announcements will be discounted relative to healthy firms because the announcement conveys new information about both the value of the divested asset and the price received, and this can outweigh the firm-level financing benefits from the divestment.

In this section we discuss the impact of financial distress conditions on both the propensity to sell assets and the stock price response to divestment announcements. The competing financing and fire sale theories traditionally rely on different definitions of financial distress and the literature is limited in its discussion of economy-wide and overlapping distress conditions.

2.1. Firm-level distress

The financing hypothesis of asset sales has in the past literature been most closely associated with financial distress for individual firms. A firm experiencing an idiosyncratic performance shock and a resulting cash shortfall is likely to sell assets when the cost of raising new finance through security issuance proves prohibitive (Lang et al., 1995). Since fire sales are associated with a concentration of firms divesting assets within a short time frame, financial distress conditions for individual firms in isolation are unlikely to be associated with fire sale discounts.

Consistent with the financing hypothesis, Ofek (1993) and Denis and Shome (2005) show a higher incidence of asset divestments for firms that experience poor performance and have higher leverage, and therefore could find external financing opportunities limited and/or expensive. Abnormal returns to sell off announcements are therefore expected to be higher for sellers experiencing firm-level distress because the announcement signals a price received that is in excess of the cost of raising additional funding (Clayton and Reisel, 2013) and a reduction in the present value of bankruptcy costs (Lasfer et al., 1996).

Lang et al. (1995) find a positive stock price response to divestments motivated by the financing hypothesis where sale proceeds represent a source of finance that would otherwise be difficult to obtain. Afshar et al. (1992) and Lasfer et al. (1996) find higher gains for divestment announcements by financially distressed UK firms. Bates (2005) and Clayton and Reisel (2013) find that announcement returns to divestments increase with leverage ratios, and where the proceeds are used to repay debt, which indicates a reduction in the expected value of bankruptcy costs for these firms.

Brown et al. (1994) provide evidence that is apparently contrary to the firm-level financing benefits of asset sales. They find that abnormal returns are significantly lower for distressed firms who use the proceeds to retire debt relative to distressed firms that cite other uses for the divestment proceeds. They argue that such divestments are more beneficial to the firm's creditors than stockholders. However, in their research financial distress is defined using information contained in the asset sale announcement and the divestments in their sample are more likely to represent forced sell-offs that can be better explained by the fire sale hypothesis.[4]

Therefore, we follow the theoretical prediction of the financing theory and the main empirical evidence and propose the following hypothesis for divestment announcements during firm-level distress:

Hypothesis 1. Stock price response is significantly higher for asset divestments during firm-level distress.

[4] Their findings are based on a small sample of 62 asset sales by distressed firms, do not distinguish between distressed and healthy firms, and are limited to very specific cases that explicitly cite the need to sell assets in order to pay off an existing or anticipated default, restructure debt, or to avoid bankruptcy as the motivation for the asset divestment. Given the specific definition of financial distress these divestment announcements are likely to contain new information on the selling firm's financial difficulties, and as a result it is difficult to isolate the fire sale effect of a forced sale at a distressed price from any financing benefit to the intended use of proceeds.

2.2. Industry-wide distress

In developing the fire sale hypothesis, Shleifer and Vishny (1992, 2011) propose that liquidity discounts for divested assets are more likely to arise under conditions of industry-wide distress. Industry-wide distress can lead to a lower price received for assets sold for two complimentary reasons: (i) the decline in industry conditions reduces the present value of cash flows from operating the asset, and (ii) the selling firm must offer liquidity discounts to make the assets attractive to potential buyers (Acharya et al., 2007).

Under the fire sale theory, industry competitors represent the highest value users of an asset and therefore should be willing to offer the highest price to the divesting firm. However, when the performance shock affects all firms in an industry then competitor firms experience the same short-term liquidity constraints and long-term debt overhang problems faced by the selling firm and are unable to offer the seller's minimum price for the asset. This increases the likelihood of asset purchases by non-industry firms who are only willing to buy the assets at lower valuations.

A negative price reaction to a divestment announcement for firms experiencing industry-wide distress most likely reflects both new information on the severity of the localized financial distress conditions within the industry and the resulting reduction in asset values, and price discounts offered to attract a buyer (Marshall et al., 2012). Financing benefits can still exist for divestments made during industry-wide distress conditions, but the stock price response to the divestment announcement is expected to be lower in comparison to firm-level distress conditions given these fire sale costs.

Industry-wide distress conditions are expected to impact both the likelihood of asset divestments and the price received for divested assets. Asquith et al. (1994), Pulvino (1998), and Schlingemann et al. (2002) find that divestments are more likely in industries that have liquid markets for asset sales. Ramey and Shapiro (2001) find evidence of fire sale discounts in a sample of

divestments by US aerospace firms. Acharya et al. (2007) find that industry conditions are a key determinant of recovery values following firm defaults. Marshall et al. (2012) find a significantly negative response to layoff announcements during the global financial crisis, which is most pronounced for firms in financial services industries.

The above evidence supports the relative importance of the fire sales hypothesis during periods of industry-wide distress when firms are forced to sell core assets to non-industry acquirers and at a price below fundamental value. Therefore, we propose the following hypothesis:

Hypothesis 2. Stock price response is significantly lower for asset divestments during industry-wide distress.

2.3. Economy-wide distress

The impact of economy-wide distress conditions on the market reaction to asset divestment announcements is less well understood empirically, and as it has not been the primary focus of the competing financing and fire sale theories, is subject to greater ambiguity theoretically.

Although much of the empirical research on fire sales has focused on industry-wide distress, Shleifer and Vishny (1992) propose that fire sale effects would also be prevalent during economy-wide distress periods. They propose that when the economy is distressed there are many potential industries that have to compete for the financing provided by deep pocketed purchasers of distressed firms' assets. This creates fire sale conditions for divesting firms and would be associated with a lower stock price response to divestment announcements.

Financing benefits can also be expected during a period of economy-wide distress. Given less than perfect correlation of financial distress conditions across industries and economies, Borisova et al. (2013) propose that a foreign buyer is able to pay a higher price for divested assets in

comparison to financially distressed domestic competitors. We extend this line of reasoning to propose a potential financing benefit to asset purchases by non-industry buyers during periods of economy-wide distress. As long as the economic shock is less than perfectly positively correlated across industries within a single country there can be a potential pool of non-industry buyers that do not suffer financial distress and who therefore can bid up the price of the divested assets to reduce or eliminate the liquidity discount associated with fire sale conditions. If this is the case, financing benefits during economy-wide distress are driven by asset purchases made by non-industry acquirers of the divested assets. Of course, this financing benefit can exist and potentially be stronger during periods of industry-wide distress. During industry-wide, but not economy-wide distress, there is expected to be a greater pool of non-industry firms in a position of financial strength to acquire the divesting firm's assets. Therefore, we propose three distinguishing features of the financing benefits and fire sale costs to divestments that we expect to differ between economy-wide distress relative industry-wide distress.

First, external debt and equity capital can be more easily accessed during periods of localized industry-wide distress. Therefore financing benefits to asset divestments are expected to be stronger during economy-wide distress. Second, we separately examine divestments of core and non-core assets. Fire sale costs during industry-wide distress are expected to be greatest surrounding the disposal of those core assets suffering industry-wide distress, whereas financing benefits under both industry-wide and economy-wide distress accrue to the disposal of both core and non-core assets. Third, we examine the operating industry of the firm acquiring the divested assets. We expect that industry-wide distress reduces the likelihood of divestment to non-industry acquirers and that any divestments to non-industry acquiring firms must be made at significant discounts to fundamental values to attract a buyer. The impact of buyer identity on the stock price response to asset divestments during economy-wide distress is more ambiguous. The fire sale theory predicts that

unrelated buyers place a lower value on the acquired assets, whereas financing benefits under economy-wide distress are expected to be greater if competitive bidding by non-industry acquiring firms increases the price received for the divested assets.

As with industry-wide distress, economy-wide distress will lead to a reduction in asset values given lower current and expected future profitability from the firm's assets. However, since a recession is general to all firms in the economy we do not expect the divestment announcement to convey specific and negative information on the value of the divesting firm's assets. Therefore, the stock price reaction to the divestment announcement reflects new information on the price received for the asset and any financing benefits at the firm-level given difficulties in accessing external capital markets during a period of economy-wide distress (Borisova et al., 2013).

Empirical research on the likelihood of divestment, the price received, and the stock price response to asset sale announcements during economy-wide distress is also limited. Campello et al. (2010) show that financially constrained managers are more likely to sell off assets during the financial crisis of 2008. Alexandrou and Sudarsanam (2001) find that firms announcing asset divestments during a recession experience higher abnormal returns relative to firms announcing during periods of economic growth. They attribute this to economy-wide distress forcing firms to divest poorly performing subsidiaries that lack strategic fit with the core assets of a firm. During periods of economic health such pressures are less prevalent. Similarly, Ang and Mauck (2011) find higher premiums in merger transactions during periods of economy-wide distress. Acharya et al. (2007) find no relation between economic conditions and value received from creditor recoveries.

Given ambiguity in the relative importance of the financing and fire sale hypotheses of asset divestments under economy-wide distress conditions we propose competing hypotheses for its relative impact on stock price returns surrounding divestment announcements:

Hypothesis 3a. Stock price response is significantly higher for asset divestments made during economy-wide distress.

Hypothesis 3b. Stock price response is significantly lower for asset divestments made during economy-wide distress.

2.4. Interaction of financial distress conditions

In this section we extend our focus on financial distress to consider the overlap of firm-level, industry-wide, and economy-wide distress conditions that are expected to give rise to competing financing benefits and fire sale costs to the asset divestment. We suggest that the importance of specific distress conditions is expected to impact on the market response to asset divestment announcements. If the financing benefits dominate, we expect a positive market response to the announcement. If the fire sale costs dominate, we expect a negative market response.

Maksimovic and Phillips (1998) find that industry-wide conditions are more important than firm-level conditions in explaining asset sale and plant closure decisions at bankrupt firms. Kruse (2002) finds that divestments are more likely when the market for asset sales is liquid and selling firms are not financially constrained. Pulvino (1998) finds that aircraft sales by financially constrained firms are made at a discount only when the overall airline industry is distressed. This is driven by an increase in the likelihood of selling assets to low value non-industry acquirers. Eckbo and Thorburn (2008) find fire sale discounts in automatic bankruptcy auctions when the industry is suffering financial distress. In contrast, Ang and Mauck (2011) find that merger premiums to financially distressed firms are actually higher during periods of economic distress.

This summary of prior literature highlights the importance of identifying distinct financial distress conditions, in isolation and in combination, to understand the expected stock price response to asset divestments. However, given the numerous possible combinations of distress conditions we

do not propose formal hypotheses. We do note that conditions where fire sales are expected to be more prominent can lead to a less positive assessment of asset divestments.

3. Data and research method

3.1. Sample construction

The sample of asset divestments is collected from SDC Platinum over the 22-year period from January 1988 to December 2009 for firms with their primary listing on the London Stock Exchange (LSE). We collect the announcement date and other supplementary information including industry designation of the divested asset and the parent firm from this database. This produces an initial sample of 16,684 divestment announcements.

We exclude financial and utility firms given their regulatory environment and government backing during the financial crisis.[5] We also exclude announcements by firms in Datastream level 6 industries with fewer than five firms to improve accuracy of industry-wide distress measures. We also exclude firms with missing or zero stock returns data for each day in the estimation and event windows. We retain only announcements by firms in the FTSE All-Share Index in the six months prior to the divestment announcement. This is to ensure the accuracy of the reported event dates by focusing on listed firms that receive greater media coverage. Focusing on firms in the All-Share Index also allows for more accurate measurement of firm-level financial distress conditions.[6] We collect data on the FTSE All-Share Index constituents from Worldscope and the London Business

[5] For example, UK Government backing of Royal Bank of Scotland and Lloyds Banking Group led the European Union competition commissioner to force asset divestments at these firms under regulations governing the provision of state aid. These divestments remain ongoing at the time of writing, several years after receipt of government funding and outside of the immediate industry distress conditions experienced during 2008.

[6] Kruse (2002) and Schlingemann et al. (2002) impose similar restrictions to identify divesting firms. We expect that smaller and younger firms are more likely to generate operating losses and rely on access to external capital markets to finance their operating losses in the early years after listing (DeAngelo et al., 2010). Financial distress prediction models that rely on poor accounting performance to identify distress are expected to be less accurate for these firms.

School Risk Measurement Service. These filters produce a final sample of 10,718 divestment announcements.[7]

3.2. Financial distress conditions and control variables

We define financial distress at the firm, industry and economy level using a series of dummy variables that capture performance. This allows us to identify shocks to performance and cash flows that affect the incentives of firm to divest. Acharya et al. (2007) show that the effect of distress on the incentive to restructure is non-linear and therefore we use dummy variables, rather than continuous performance measures, to identify poor performance.

We follow Bhagat et al. (2005) and John et al. (1992) and define firm distress (FIRM) where the divesting firm has reported negative net income for the financial year prior to the divestment announcement. Negative net income is an important event given the tendency for managers to attempt to smooth reported accounting income.[8]

Several prior studies on industry-wide distress focus their definition on poor stock price performance alone (Gilson et al., 1990; Ofek, 1993; Opler and Titman, 1994). However, Acharya et al. (2007) find that supplementing stock price returns with declining firm revenues improves the predictive power of their industry-wide distress variable by 40%. Controlling for historical

[7] Although we focus on FTSE All-Share index constituents, our sample is not limited to very large firms. The size of firms in our sample is smaller in comparison to those examined in Borisova et al. (2013) and Clayton and Reisel (2013) (comparison is approximate given differences in exchange rates over time). The mean (median) market capitalization of our sample firms is £4,633m (£445m). The corresponding figures for deal value are £81.98m (£8.66m). Mean (median) market capitalization in Borisova et al. (2013) is $14,506m ($1,909m) and $299.8m ($55m) for deal value based on firms selling assets to domestic buyers, which are insignificantly different from those firms selling assets to cross-border buyers. Clayton and Reisel (2013) set a minimum deal value of $75m for their sample of divestments, and as a result their sample contains larger firms than in Borisova et al. (2013) and this study. Thus, despite our focus on FTSE All-Share Index constituents, our sample is unlikely to be significantly biased towards very large firms in comparison to prior studies.

[8] Our results are robust to alternative definitions of firm financial distress. Following Asquith et al. (1994) we also define financial distress using a low interest coverage dummy variable set equal to one where the divesting firm has a ratio of earnings before interest, taxes, depreciation and amortization (EBITDA) divided by total interest expense of less than 0.8 in the year prior to the divestment announcement or below 1.0 for two consecutive years prior to the announcement. Our results are also robust to defining financially distressed firms using the Taffler z-score for UK firms (Agarwal and Taffler, 2008).

performance using revenues alongside stock return performance is also important to avoid look-ahead bias in our measure of industry-wide distress. As such, we define industry-wide distress using both the measures proposed by Acharya et al. (2007) where firstly, industry-wide distress is based on poor stock price performance alone (IND 1), and secondly poor stock price performance and negative revenue growth for the median firm in the same Datastream level 6 industry group as the divesting firm in the year prior to the divestment (IND 2).

We define economy-wide distress (ECON) using the UK Governments' Treasury definition of two or more consecutive quarters of declining real gross domestic product. The UK experienced two recessions during our sample period; one lasting for five quarters from Q3 1990 and a second recession associated with the global financial crisis lasting for six quarters from Q2 2008.

Also in our regression analysis we control for a range of additional firm and divestment characteristics that are expected to be correlated with announcement returns of divesting firms. We expect that firm size (FSIZE) is negatively related to announcement returns. This can arise where larger firms have better access to capital markets (Gilchrist and Himmelberg, 1995) and are therefore less likely to benefit from a reduction in financing constraints from divestments. Growth opportunities (MTB) can be positively related to announcement returns if returns are higher for firms with good investment opportunities to reinvest the cash received from the disposal (Bates, 2005). We expect that related divestments (RELATE) are associated with lower abnormal returns given the gains to reversing diversification through asset disposals (John and Ofek, 1995). Industry liquidity conditions can also affect the likelihood of selling core relative to non-core assets (Schlingemann et al., 2002). We also include a repeat divestments dummy (CLUSTER) for frequent divestors. Stand-alone or infrequent divestment announcements are expected to convey more information to the market and we expect this variable to be negatively correlated with abnormal returns (Berger and Ofek, 1999). Alternatively, firms undertaking multiple divestments are amongst

the most financially distressed and should benefit to a greater extent from any reduction in the expected costs of financial distress. Sample firms are matched to Worldscope to collect accounting data at the financial year-end prior to the divestment. In our main regressions this matching further reduces the sample size to 9,713 observations.[9]

In further sub-sample testing we examine the effect of low debt capacity and deal size on abnormal returns surrounding divestment announcements. In the fire sale model of Shleifer and Vishny (1992) firms with low debt capacity are more likely to be forced to sell assets at prices below their fundamental value. Following Pulvino (1998) we include a low debt capacity dummy (CAPLO) for firms that have book leverage above the industry median and a current ratio below the industry median.[10] We anticipate that deal size (DSIZE) is positively related to announcement returns given the financing benefits from larger divestments (Lang et al., 1995). Deal characteristics are collected from the SDC record of the announcement. The inclusion of CAPLO and DSIZE reduces the number of observations in our regression analysis to 7,996 and 6,098 respectively.

Panel A of Table 1 describes our financial distress measures associated with the financing and fire sale hypotheses. Panel B presents the definitions of our control variables.

[Insert Table 1 about here]

Table 2 reports the number of divestment transactions classed as financially distressed. Panel A reports the number of divestment transactions over time for the full sample and across financial distress conditions and Panel B reports the number of transactions taking place during overlapping

[9] To remove the effect of outliers, we winsorize the top and bottom 0.5% of all observations for our control variables.

[10] Following Pulvino (1998) we use book, rather than market, leverage to define low debt capacity firms. This avoids conflating financing constraints with the performance shock that we use to identify financial distress conditions since the performance shock will be correlated with changes in the market leverage ratio.

distress conditions separately for our IND 1 and IND 2 measures. We also report the breakdown of divestments across Datastream level 6 industry groups in Appendix A, which highlights industry years classified as distressed during our sample time period.

Following general trends in merger activity, Table 2 shows a reduction in divestment activity in the last decade of our sample, following a peak in the late 1990s (Ang and Mauck, 2011; Duchin and Schmidt, 2013). Approximately two thirds of our sample does not experience any distress conditions at the time of the divestment announcement. For these firms, strategic motives, including the fit of the divested asset, are more likely to motivate the divestment. We address these motives in our regression models through the control variables.

Divestments during periods of industry-wide and economy-wide distress are less frequent than during firm distress conditions. IND 1 divestments are concentrated during two recessionary periods (1990/91 and 2008/09) and the collapse of media and technology stocks in 2001/2002. The largest group of divestments by IND 2 distressed firms also occurs in 2001/2002 in media and technology related industries. Home construction and automobile industries also experience distress in the early 1990s and industry-wide distress associated with the global financial crisis in 2008 is dispersed across a number of industry groups including metals, machinery, home construction, industrial services, medical equipment and supplies, clothing and apparel, and publishing.[11] There is a noticeable increase in divestment activity during periods of economy-wide distress relative to the years immediately preceding a recession, which supports the financing hypothesis. This difference highlights the importance in this paper of considering divestment activity under both industry-wide and economy-wide distress conditions. There appears to be distinctive features of industry-wide distress periods that explain the slowdown in divestments – under the fire sale hypothesis this can

[11] Unlike the US, the UK did not enter a formal recession in 2001/2002 and therefore this period is not classified as experiencing economy-wide distress for our sample firms.

arise due to a lack of potential buyers for these assets – from economy-wide distress conditions that lead to a relative increase in divestment activity.

[Insert Table 2 about here]

Table 2 Panel A also highlights connections between our three measures of financial distress. Divesting firms are more likely to operate in distressed industries and have negative net income during recessionary periods. However, we do observe distinct periods of industry-wide and economy-wide distress and a recurring, albeit less frequent, number of divestments by distressed firms during each year of our sample period. This allows us to differentiate these effects in our empirical tests. We examine this issue in more detail in Panel B, which shows a clear overlap between industry-wide distress and both firm-level and economy-wide distress conditions. 58% (45%) of industry-wide distress divestments take place at firms simultaneously experiencing at least firm-level or economy-wide distress conditions for our IND 1 (IND 2) definition. This highlights the importance of precisely isolating financial distress conditions in understanding the stock price response to divestments. The proportion of divestments that take place during firm-level and economy-wide distress conditions in isolation is higher than for industry-wide distress, suggesting that these are more likely to represent discrete and idiosyncratic events at the time of the announcement.

3.3. Event study

We calculate cumulative abnormal returns (CARs) for our divestment announcements using an estimation period from 190 to 31 days prior to the announcement date. Market model parameters are estimated with the FTSE All-Share Index as the market benchmark and t-tests of average CARs

are calculated using the standard deviation of abnormal returns (ARs) from the estimation period. We report event study CARs over the three-day window from day -1 to day +1 relative to the announcement date, day zero.[12]

4. Stock price response to asset divestments and financial distress

4.1. Summary statistics

We now examine how firm and deal characteristics differ across financial distress conditions in a manner that can influence the motivation for the divestment, and therefore, potentially affect the stock price response to divestment announcements. Table 3 presents descriptive statistics for firm and deal characteristics between distressed and non-distressed divestment firms.

[Insert Table 3 about here]

Panel A separates divestments by firm-level distress. It shows distressed firms are larger than non-distressed firms and have weaker growth opportunities. We find no relation between firm-level financial distress and deal size, the likelihood of selling core assets, clustering of divestment activity, or the likelihood of being classified as a low debt capacity firm.

Panels B and C separate divestments according to our two industry-wide distress measures, IND 1 in Panel B and IND 2 in Panel C. We find industry-wide distressed firms are smaller based on sample medians and divestments represent a larger fraction of the firm's assets. CAPLO is unrelated to divestment activity across both measures of industry-wide distress. The mean FSIZE and MTB are higher, but this is driven by a small number of divestments by the largest firms in our

[12] The results presented in this paper are robust to wider event windows that can address concerns that divestments could contain information about the overall prospects of the divesting firm, which contaminates any financing or fire sale inferences contained in the immediate stock price response. Our results also hold for the two-day event window from day -1 to day 0 surrounding the announcement.

sample. For the IND 1 distress group we find that divestors are more likely to sell core assets, which are likely to be those most subject to liquidity discounts given financial difficulties at industry competitors. IND 1 sellers are also less likely to make multiple divestments, but this finding does not hold for the more restrictive IND 2 measure of industry-wide distress.

Finally, Panel D separates divestments by economy-wide distress conditions. We find no difference in firm size or deal size between distressed and non-distressed conditions. Unsurprisingly growth opportunities are lower during a recession. Divestments made during these periods are more likely to involve core assets and divesting firms are more likely to have low debt capacity.

Overall, firms selling assets during firm-level and industry-wide distress conditions tend to be larger than the average divesting firm in our sample. Although we find that divestments during industry-wide distress are no more likely to be driven by low debt capacity, the finding that divestments during industry-wide distress periods are larger suggests that assets representing a higher proportion of firm value are being sold when fire sale conditions and a lack of industry buyers are most prevalent. The combined propensity to sell core assets and high firm-level financing difficulties during periods of economy-wide distress likely reflects a strong financing benefit to divestments during a recession.

4.2. Financial distress conditions and stock price response to asset divestments

As a brief precursor to our main analysis, in Table 4 we present univariate sorts of CARs partitioned between non-distressed and distressed firms. It shows the three-day CAR is significantly positive for all four groups of non-distressed firms and ranges from 0.74% to 0.94%. Similar levels of abnormal results are found by Borisova et al. (2013) and Sicherman and Pettway (1992). This positive announcement reaction supports theories of divestment based on operating efficiency for the selling firm and improved fit with the buyer.

In terms of our main analysis we find an average CAR of 1.05% (significant at the 1% level) for divestment announcements during firm-level financial distress conditions. The results are larger than those for non-distressed firms, but the difference in returns between non-distressed and distressed firms is not significant. As such, our findings do not support hypothesis 1 and the financing explanation of the market reaction to divestments. These results reject fire sales as the main explanation of the stock price response to asset divestments by distressed firms. Therefore, we suggest that any value loss from selling assets below fundamental value for these firms is outweighed by a reduction in the expected costs of financial distress.

[Insert Table 4 about here]

Table 4 shows that divestments by firms in the IND 1 group generate insignificant CARs of -0.03%. These results are lower than the 0.94% average CAR for non-distressed firms, and there is a significant difference between the two groups (at the 1% level). The magnitude of this difference is more pronounced when focusing on the IND 2 measure of distress. The average CAR is -0.66% and the difference in returns between distressed and non-distressed firms is -1.57% (both significant at the 10% level or better). The more pronounced difference between distressed and non-distressed firms in the IND 2 group supports Acharya et al. (2007), who show that their refined definition of industry-wide distress utilizing both stock price and accounting data is a stronger predictor of recovery values following defaults than industry-wide distress based on stock returns alone. These findings support hypothesis 2 and are consistent with fire sales by firms experiencing industry-wide distress. This does not rule out financing as a motivation for the divestment. Indeed, the fire sale explanation implies that divestments are forced as firms must raise cash in order to meet liabilities falling due. Our results suggest that the fire sale effect outweighs any financing benefits for firms

experiencing industry-wide distress and leads to a significantly lower stock price response to divestments. This can arise where the natural buyers of the asset are also financially constrained and could be selling off similar assets. Under these conditions, the divested assets are likely to be purchased by lower value users who are willing to acquire the assets only at a significant discount to their fundamental value (Shleifer and Vishny, 2011).

We find that the average CAR for divestments during periods of economy-wide distress is 1.08% (significant at the 1% level). As with the findings for firm-level distress, the results are not significantly higher than those for non-distressed periods. Our findings are therefore inconsistent with the competing hypotheses 3a and 3b on the relative importance of financing and fire sale effects during periods of economy-wide distress, and suggest that no specific effect dominates during these periods. Contrasting our findings with those for industry-wide distress, and given the correlation between industry-wide and economy-wide distress shown in Table 2, our results highlight that the impact of economy-wide distress on divestment activity is distinct from the fire sale conditions associated with industry-wide distress in Shleifer and Vishny (1992).

We extend our univariate analysis in Table 5, which presents regression results of event study CARs against financial distress conditions and our control variables for divesting firm and deal characteristics outlined in Section 3. Our summary statistics in Table 3 highlight that firm and deal characteristics that are correlated with divestments during distress periods vary with the nature of the distress, highlighting the need to control for these factors in our regression analysis. Our univariate analysis could also overstate the significance of differences in t-statistics between distressed and non-distressed periods due to cross-correlation of firm observations during periods of

industry-wide and economy-wide distress. To correct for this, we follow Duchin and Schmidt (2013) and cluster standard errors for each Datastream level 6 industry group in our sample.[13]

Model 1 in Table 5 examines the impact of firm distress on CARs and reports a positive, but insignificant and economically small, coefficient of 0.16%. This supports our univariate finding and suggests that firm-level financing benefits are unrelated to CARs surrounding divestments for distressed firms. Across all models we find that firm size is negatively related to CARs, but the remaining control variables are insignificant. We interpret this as suggesting that stockholders in small firms benefit to a greater extent from asset divestments because they are less easily able to mitigate financing constraints by raising funds from alternative sources.

In the fire sale model of Shleifer and Vishny (1992) the divesting firm has defaulted on its debt and is forced to sell assets in order to repay creditors. However, Kruse (2002) develops a more relaxed version of this theory. Firms can experience a performance shock, but as they remain a going concern they may not be forced to divest assets. The decision to divest will depend on firm characteristics as well as the severity of financial distress conditions. Borisova et al. (2013) make a similar point on selection bias in the context of the choice to divest to a domestic or foreign buyer.

To address this concern we use a Heckman (1979) treatment effects model to estimate the probability of divesting assets at time t relative to financial distress conditions and firm characteristics at time t-1. We estimate a probit model where the dependent variable is set equal to one if the firm divests assets at time t, and zero otherwise. Data is collected for all UK publicly quoted firms with available financial data in Datastream and we match this to data on divestment announcements from SDC Platinum.[14] We examine the decision to divest against all three financial

[13] Our results are unaffected if we correct for cross-correlation at the economy level and cluster standard errors by year.

[14] Our findings here potentially understate the degree of divestment activity by UK firms during our sample period. Oswald and Young (2004) note that SDC Platinum coverage is incomplete for repurchasing activity by UK firms during the earlier part of our sample period and it is possible the same may apply for our sample of asset divestments.

distress conditions and control variables from the models proposed by Harford (1999), Kruse (2002), and Pulvino (1998). We present these results in Appendix B. We then use these models to estimate the inverse Mills ratio, denoted as LAMBDA, as an additional control variable in second stage regression models of divestment announcement CARs. The inclusion of the required control variables to estimate LAMBDA reduces the sample size to 7,459 observations. We present two separate models in Appendix B, one for IND 1 and one for IND 2. In regressions where FIRM and ECON are the main explanatory variables we use LAMBDA calculated from Model 1, which uses IND 1 to estimate the probability of divestment.[15]

Model 2 of Table 5 shows the results of the Heckman treatment model with FIRM as the main explanatory variable. The coefficient on FIRM distress is positive 0.40% and is weakly significant at the 10% level. The coefficient for LAMBDA is positive but insignificant in this and all of the regression models in Table 5, suggesting that factors associated with the decision to divest have not significantly biased our initial estimates. Our findings in Model 2 provide some support for hypothesis 1 relating to the firm-level financing benefits of divesting assets for firms experiencing an idiosyncratic performance shock.

[Insert Table 5 about here]

Models 3 to 6 examine the impact of IND 1 and IND 2 distress on CARs, with OLS regressions in the odd numbered columns and second-stage treatment regressions in the even numbered columns. Consistent with our univariate analysis, the coefficients for both our measures of industry-wide distress suggests that CARs are between 0.92% and 1.59% lower for divestments

[15] Our results are unchanged if we use LAMBDA estimated from regression Model 2 or if we estimate regressions of the probability to divest against financial distress conditions individually.

during these periods (all significant at the 5% level or better). This provides strong support for hypothesis 2. Once again, the results are economically larger for the IND 2 measure of distress that uses both stock price performance and sales growth to identify distress. Even if one attributes the entire effect of IND 1 to revised future growth prospects in a declining stock price, there is a residual effect of industry-wide distress in our IND 2 dummy (Acharya et al., 2007). Our descriptive statistics in Table 2 highlights the relative infrequency of divestments during industry-wide distress periods, suggesting that firms are aware of the potential for fire sale discounts on divested assets and respond by divesting less frequently. Our results show that the lower price received for divested assets during industry-wide distress conditions is reflected in a significantly lower stock price response to divestment announcements for these firms.

Models 7 and 8 examine the impact of economy-wide distress on divestment CARs. As with firm-level distress, the coefficient for ECON is positive and significant only in the treatment Model 8. This provides partial support for the financing benefits to asset divestments during periods of economy-wide distress and is consistent with hypothesis 3a, suggesting higher returns to divestments during periods of economy-wide distress. At the very least the results allow us to reject hypothesis 3b that fire sale effects lead to a lower stock price response to divestments during periods of economy-wide distress. During periods of economy-wide distress, any value loss in selling assets from a weakened bargaining position is outweighed by a reduction in expected costs of financial distress. We propose that the source of financing benefits during economy-wide distress arises from the ability of financially constrained firms to sell assets to acquiring firms outside their operating industry that are financially healthy or at least not impacted by the economy-wide distress to the same extent as the divesting firm. We examine this issue in more detail in section 4.5.

Collectively, our results in Tables 4 and 5 show that during industry-wide distress periods, when the natural buyers of the divested assets are also likely to experience financing constraints, the

fire sale effect results in a significantly lower stock price response to divestment announcements. Our findings for firm-level distress provide limited support on the financing benefits for asset divestments. We also provide new evidence on the potential financing benefits to asset divestments during periods of economy-wide distress, which is by comparison noticeably underexplored in the theoretical and empirical literature.

4.3. Debt capacity, fire sales, and financing

Thus far our examination of financial distress conditions treats all firms equally, irrespective of the financing constraints they face prior to the performance shock. However, both the financing and fire sale theories of asset divestments predict an important role for a firm's debt capacity in predicting the likelihood of divestment (Kruse, 2002; Ofek, 1993) and the stock price response (Brown et al., 1994; Lasfer et al., 1996). Under the financing theory firms sell assets because they are the lowest cost source of funding for a firm that needs to raise capital quickly (Lang et al., 1995). The cost of raising finance is expected to be greatest for firms suffering a liquidity shortfall and long-term debt overhang problems. As such, we expect that the potential financing benefits to divestment will be concentrated in the sub-sample of firms with low debt capacity. Likewise, under the fire sale hypothesis stock price returns on announcement are discounted when forced divestments take place during a period of industry-wide distress. In the original Shleifer and Vishny (1992) model firms are forced to sell assets, but in practice, industry-wide distress conditions are a determinant of the likelihood that divestment takes place (Pulvino, 1998). We expect that fire sale conditions and the resulting lower stock price response to divestments during periods of industry-wide distress are concentrated in the sub-sample of divestments for firms with low debt capacity.

To examine how debt capacity affects abnormal returns to selling firms around divestment announcements we add the CAPLO dummy variable to our OLS regression models in Table 5.

Table 6 shows the coefficient for CAPLO is positive but statistically insignificant in Models 1, 4, 7, and 10, which examine each of our individual financial distress conditions. Therefore, divestment announcement abnormal returns are not driven by resolution of financial distress costs for the full sample. This is not surprising as for the general population we would expect that divestments are driven by a variety of strategic motivations including refocusing on core operations (Berger and Ofek, 1999). The inclusion of CAPLO as an explanatory variable also does not affect the relation between financial distress conditions and CARs surrounding divestments announcements.

[Insert Table 6 about here]

Following our earlier discussion, we expect that financing and fire sale effects of asset divestments are restricted to the sub-sample of firms that are forced to sell assets to resolve financial distress. We identify these firms based on the CAPLO dummy and we estimate separate regressions of abnormal returns against financial distress conditions for low debt capacity and all other firms.

In Models 2 and 3 of Table 6 we present these results for firm-level distress. For low debt capacity firms in Model 2, we find that returns are 0.80% higher for sellers experiencing firm-level distress (significant at the 5% level). For unconstrained firms in Model 3, abnormal returns for sellers experiencing firm-level distress are indistinguishable from non-distressed firms. This provides support for hypothesis 1 and the firm-level financing benefits to asset divestments for financially constrained firms. Firm-level financial distress conditions do not in isolation lead to higher returns for distressed sellers, but for firms experiencing financial constraints due to a combination of poor short-term liquidity and long-term debt overhang, divesting assets is expected to reduce the present value of the costs of financial distress (Clayton and Reisel, 2013).

We examine the role of industry-wide distress in Models 5 and 6 (IND 1) and 8 and 9 (IND 2) of Table 6, again partitioned by our CAPLO dummy. Our main result of a negative relation between industry-wide distress and abnormal returns surrounding divestment announcements is again restricted to the sub-sample of low debt capacity firms in Models 5 and 8. Announcement period CARs for IND 1 and IND 2 are 1.71% and 2.76% lower respectively (both significant at the 1% level) in comparison to non-distressed divesting firms. This can be explained by fire sale discounts when financially constrained firms are forced to sell assets, and provides strong support for hypothesis 2. Firms with low debt capacity that suffer short-term term liquidity constraints and long-term debt overhang are forced to sell assets at times when the natural buyers of these assets are also likely to be financially constrained, and as a result receive a lower price for the divested assets. Firms with spare debt capacity do not experience fire sale discounts during periods of industry-wide distress, as shown by the insignificant coefficients for IND 1 and IND 2 in Models 6 and 9 respectively.

In Models 11 and 12 we find no evidence that the relation between economy-wide distress and abnormal returns for selling firms surrounding asset sale announcements varies with selling firm debt capacity. Our results here fail to provide support for the relative importance of firm-level financing benefits for firms selling assets during periods of economy-wide distress, irrespective of whether the asset sale is likely to be have been forced by low debt capacity. At the very least our findings do again suggest an important distinction between industry- and economy-wide distress conditions in understanding fire sale discounts (Acharya et al., 2007). Fire sale discounts to asset sales are not present during periods of economy-wide distress for our sample of divestments.

For our control variables, we find that firm size is negatively related to divestment returns in all regression models. For unconstrained firms we find a negative relation between MTB and abnormal returns (significant at the 10% level), which may be driven by free cash flow concerns

when unconstrained managers have discretion to reinvest the divestment proceeds (Lang et al., 1995).[16]

Overall, our findings for low debt capacity firms highlight an important channel through which financing and fire sale effects have a strong impact on announcement returns to corporate asset divestitures. To the extent that low debt capacity firms are more likely to have been forced to sell assets under pressure from creditors, the strong stock price impact under firm-level and industry-wide distress highlights that financing and fire sale effects are most important for financially constrained firms with low debt capacity. For unconstrained firms, strategic motivations are expected to be more important in explaining stock price returns surrounding the divestment announcement.

4.4. Interaction of financial distress conditions

Our previous findings in Tables 4 and 5 focus on individual distress conditions but do not consider the overlapping firm-level, industry-wide, and economy-wide distress conditions highlighted in Table 2. Shleifer and Vishny's (1992) fire sale model emphasizes the importance of industry-wide or economy-wide distress conditions over firm-level distress in creating fire sale conditions. If the performance shock that necessitates an asset sale is idiosyncratic to the firm, then potential buyers do not suffer the liquidity and debt overhang problems that prevent buyers from bidding the price of the asset up to its fundamental value in best use. By isolating various combinations of distress conditions we are better able to examine the impact of specific distress conditions on the market response to divestment announcements.

[16] We exclude LAMBDA here and in subsequent tables since the variable is not significantly related to abnormal returns in Table 5. We perform additional untabulated regressions with LAMBDA as an additional control variable. We again find that higher returns to distressed to firm-level and industry-wide distress are restricted to the sub-sample of low debt capacity sellers. The inclusion of LAMBDA leads to the ECON variable becoming positive and significantly in Model 11 for the sub-sample of low debt capacity firms. As with Table 5, we find that LAMBDA is insignificant in all regressions, suggesting that selection bias has not significantly impacted on the results presented here.

Empirical research on the overlap of financial distress conditions suggests that industry-wide distress and resulting fire sale conditions outweigh any firm-level financing benefits to divestments. Maksimovic and Phillips (1998) find that industry conditions are more important than firm specific Chapter 11 bankruptcy in explaining the asset sale and plant closure decisions of bankrupt firms. Also Kruse (2002) finds that divestment activity is more likely for healthy firms in growing industries. Overlapping financial distress conditions can also affect the price received for the asset, and therefore the stock price response to a divestment announcement. Pulvino (1998) finds that aircraft sales by financially constrained firms occur at a discounted price only when the airline industry is distressed. Eckbo and Thorburn (2008) find evidence of fire sale discounts in automatic bankruptcy auctions when the industry is suffering financial distress. Using the same z-score measure to identify firm-level financial distress as Afshar et al. (1992) and Lasfer et al. (1996), Alexandrou and Sudarsanam (2001) find a higher stock price response to divestments by non-distressed firms, which is strongest during economy-wide distress conditions.[17] In contrast, Ang and Mauck (2011) find that merger premiums to financially distressed firms are higher during economy-wide distress periods.

Given the financing benefit to divestments under firm-level and economy-wide distress conditions shown in Tables 5 and 6, our previous findings for industry-wide distress could understate the severity of the negative market reaction to divestments under fire sale conditions. As such, we now extend our focus on financial distress to consider divestments in periods that overlap with firm-level, industry-wide and economy-wide distress conditions.

[17] Afshar et al. (1992) and Lasfer (1996) examine divestments made by UK firms in 1985 and 1986 whereas Alexandrou and Sudarsanam (2001) examine divestments over the period 1987 to 1993, which incorporates an economy-wide UK recession in the early 1990s. As such, direct comparison of the differing findings of these studies is difficult, but it is clear that sample time period and time-varying economy-wide prospects are likely to be a factor in the differing results.

In Table 7 we present event study abnormal returns for each of the eight sub-samples of overlapping financial distress conditions outlined in Panel B of Table 2. Panel A presents results based on the IND 1 classification and Panel B presents our findings using the IND 2 classification of industry-wide distress.

In both panels we find abnormal returns of 0.93% (significant at the 1% level) for firms selling assets in the absence of financial distress conditions. We find support for the financing benefits of divestments during periods of combined firm-level and economy-wide distress. Abnormal returns are 1.99% and 1.57% respectively (both significant at the 1% level) and the difference relative to the non-distressed group is weakly significant at the 10% level in Panel A. We find no evidence that firm-level or economy-wide distress in isolation is associated with significant differences in CARs between distressed and no distress announcements, suggesting that our earlier results of a financing benefit under both circumstances is restricted to the sub-sample of divesting firms experiencing firm-level and economy-wide distress simultaneously. This can arise where firm-level distress generates a need to sell assets and under economy-wide distress conditions there are sufficient non-distressed acquirers from outside of the operating industry to provide an important source of competitive bidding to counteract the liquidity discounts observed during periods of industry-wide distress (Borisova et al., 2013).

[Insert Table 7 about here]

We again find evidence consistent with fire sale conditions during periods of industry-wide distress, both in isolation and when interacted with a period of economy-wide distress. In most cases the returns are insignificantly negative, but the difference between returns for divestments during industry-wide distress periods and no distress periods are significant and negative (at the 5% level or

better). For example, during periods of industry-wide distress in isolation (combined with economy-wide distress) the returns are 1.50% (1.24%) lower in comparison to divestments by healthy firms, when focusing on the IND 1 measure of distress. Our findings are even stronger for IND 2 distress conditions.

We extend this univariate analysis in Table 8, which presents the results of regressions of CARs surrounding divestment announcements against overlapping financial distress conditions. We present results for the full sample and separately for financially constrained and unconstrained firms based on our CAPLO dummy, given the importance assigned to this variable in Section 4.3. To define overlapping financial distress conditions we use only the included dummy variables for each distress condition.[18] Models 1 to 3 in Panel A examine IND 1 distress conditions and Models 4 to 6 in Panel B examine IND 2 distress. The reported coefficient compares abnormal returns for the included distress conditions group relative to the omitted no distress conditions group.

Our regressions for the full sample confirm that industry-wide distress is the most consistent determinant of divestment returns in our sample. The coefficients for industry-wide distress in isolation (Models 1 and 4) are significantly negative. The differences of 2.12% in Model 1 and 2.86% in Model 4 are economically large both in absolute terms and in comparison to the corresponding figures of 0.92% and 1.59% in Table 5. These results highlight that the severity of fire sale discounts is potentially understated when the relevant research study fails to filter out the potential financing benefits to asset divestments during periods of overlapping firm-level and economy-wide distress.

[Insert Table 8 about here]

[18] For example, the notation FIRM + IND + ECON indicates that the divestment announcement took place under firm-level, industry-wide, and economy-wide financial distress conditions simultaneously. The notation IND indicates that the divestment took place during industry-wide distress conditions, but the overall economy and the announcing firm were not distressed at the time of the announcement.

In contrast to our earlier findings in Table 5, we find no evidence of higher returns for divestments by firms experiencing economy-wide or firm-level distress in isolation, but inclusion of firm distress can mitigate the negative impact of industry-wide distress conditions on announcement abnormal returns. We also find that firm size is negatively related to divestment abnormal returns in all of our models and our remaining control variables are insignificant.

For the sub-sample of low debt capacity divesting firms in Models 2 and 5, we confirm the negative relation between industry-wide distress and abnormal returns. We find that abnormal returns are significantly lower during periods of industry-wide distress for unconstrained firms, but the difference is economically smaller than observed for low debt capacity sellers. For the IND 1 classification we also find support for the univariate result of lower returns during periods of overlapping industry-wide and economy-wide distress within the sub-sample of financially constrained divesting firms, but the result is insignificant for the IND 2 measure of distress.

For low debt capacity firms, we find evidence of a significant financing benefit to divestments during periods of overlapping firm-level and economy-wide distress. The returns are 3.25% (3.20%) higher based on our IND 1 (IND 2) classification. Our results suggest that any financing benefit from divestments during firm-level and economy-wide distress in the previous section is due to the overlap of financial distress conditions, and are conditional on financing constrains due to short-term liquidity and long-term debt overhang problems.

Collectively, these findings highlight a core contribution in our paper. The results of prior studies that consider individual distress conditions in isolation are likely to include divestment announcements characterized by more than one type of distress condition, and therefore, may under or overstate the relevant financing and fire sale effects of financial distress conditions. Our findings in this section confirm the importance of industry-wide distress and resulting fire sale conditions in understanding the stock price response to divestment announcements. The financing benefit of

divestments within our sample is restricted to the sub-sample of low debt capacity firms experiencing both firm-level and economy-wide distress at the time of the divestment. If a recession increases the difficulty of obtaining external debt and equity funding for financially distressed firms, then asset divestments are more likely to represent the lowest cost source of financing for selling firms.

4.5. Further determinants of financing benefits and fire sale costs to divestment announcements

In this section we provide additional tests to further investigate the underlying determinants and drivers of the financing benefits and fire sale costs surrounding asset divestments by firms experiencing financial distress conditions.

4.5.1. Firm size

Following Kruse (2002) and Schlingemann et al. (2002) we have constructed our sample to exclude divestments by very small firms, in our case by focusing on firms included in the FTSE All-Share Index of the LSE. This reduces concerns surrounding completeness of data coverage in SDC Platinum and the use of firm-level accounting data as a predictor of financial distress for smaller firms listed on secondary markets. However, by focusing on FTSE All-Share constituents we impose two potential selection biases. First, financial distress conditions are expected to be less severe for the largest firms in our sample, who can more easily raise debt and equity capital as an alternative to divesting assets. This effect would lead to the financing benefits and fire sale costs of asset divestments being concentrated amongst the smallest firms in our sample and biases against our ability to detect a relation between financial distress conditions and divestment CARs. Alternatively, asset sales by larger firms within an industry could be subject to greater fire sale discounts if smaller

industry competitors are unable to absorb larger asset sales. This would lead to fire sale effects being concentrated amongst the largest firms in our sample.

To examine this issue we report separate regressions in Table 9 for large and small sample firms, where large firms are identified as those with book value of total assets above the overall sample median. In Models 1 and 2 we find no relation between firm-level distress and abnormal returns by both large and small sample firms. CARs are negatively related to firm size and growth opportunities for the sub-sample of large firms only. None of our control variables are related to the CARs for small firms and the explanatory power of our regressions for the sub-sample of small firms is generally low (the R-squared values are approximately half those of large firms and the regression F-statistics are insignificant for this group of divestments).

[Insert Table 9 about here]

In Models 3 to 6 we examine the role of industry-wide financial distress conditions. We find that the negative relation documented earlier in the paper is driven by the sub-sample of smaller firms in Models 4 and 6. Industry-wide distress is unrelated to abnormal returns surrounding divestment announcements for the largest firms in our sample. Finally, in Models 7 and 8 we examine economy-wide distress and find that the financing benefit to divestments is restricted to the sub-sample of small firms in Model 8.

Our finding that fire sale costs during industry-wide distress and financing benefits during economy-wide distress is restricted to the smallest firms in our sample most likely reflects larger firms having easier access to external debt and equity markets even during times of financial distress conditions, reducing their need to sell assets at distressed prices when these assets are most illiquid. It also highlights that our focus on large firms most likely means that our empirical findings

understate the true impact of financial distress on CARs surrounding asset divestments since the large firms in our sample have relatively easier access to alternative financing sources.

4.5.2. Divestment of core and non-core assets

We have previously identified industry-wide distress based on the overall divesting firm. However, the fire sale hypothesis primarily predicts that liquidity discounts and lower stock price returns on announcement are concentrated in divestments of core business assets. If divesting core assets leads to fire sale discounts, as in Shleifer and Vishny (1992), then we expect to observe lower abnormal returns to divestment of core assets during periods of industry-wide distress. As long as industry-wide distress is less than perfectly positively correlated across all industries in the economy, fire sale discounts should not be evident for divestitures of non-core assets. The financing hypothesis, on the other hand, makes no clear distinction between core and non-core assets. The divested asset simply represents the lowest cost source of financing for the selling firm.

We examine this issue in more depth by separating divestments between those involving the sale of core and non-core assets. In our main testing we find no relation between related divestments and stock price response to divestments. However, in the fire sale hypothesis it is specifically divestment of core assets, those subject to industry-wide distress conditions, which attract liquidity discounts. Moreover, under the financing explanation of the stock price response to economy-wide distress it is the ability of financially constrained firms to divest to non-industry competitors that drives the positive market reaction. This arises given the imperfect correlation of distress conditions across industries within the economy. We therefore estimate separate regressions of abnormal returns for divestment of core and non-core assets based on the RELATE variable described previously and we report our findings in Table 10.

In Models 1 and 2 we find no relation between firm-level distress and abnormal returns for firms selling core and non-core assets respectively, suggesting that benefits from re-focusing on core operations are unrelated to seller returns following a firm-level performance shock

[Insert Table 10 about here]

We examine industry-wide distress in Models 3 to 6. In Models 3 and 5 we find significantly lower abnormal returns of 1.20% and 2.55% respectively (both significant at the 5% level) when firms sell off core assets that are most likely to suffer from fire sale discounts. The coefficients for IND 1 and IND 2 are noticeably weaker for disposal of non-core assets in Models 4 and 6 respectively and weakly (not) significant in Model 4 (6) (at the 10% level). Our results here highlight that it is specifically those assets expected to suffer from fire sale conditions that lead to stockholders discounting CARs to divestment announcements.

In Models 7 and 8 we examine how the role of economy-wide distress varies for core and non-core assets. We find no relation in Models 7 and 8 respectively. This again provides support against hypothesis 3b that periods of economy-wide distress should be associated with fire sale discounts on the sale of business assets, and confirms that industry-wide and economy-wide distress conditions have different implications for the price that divesting firms can achieve when selling assets.

Collectively, the results in Table 10 highlight an important aspect of fire sale costs from asset divestments. Fire sale conditions are most prevalent when firms experiencing industry-wide distress sell core operations since these are the assets that are most likely to be subject to liquidity discounts. Any discounts are expected to be small and insignificant when firms are able to dispose of non-core lines of business in healthy industries with an active market for corporate assets.

We now extend this analysis to examine relatedness between the selling firm/unit and the acquiring firm/unit. We identify related transactions where the acquiring firm/unit shares the same 2-digit SIC code as the selling firm/unit. SIC codes for acquiring firms are again collected from SDC Platinum. When divesting firms sell assets to same-industry buyers we expect liquidity discounts to be most prevalent during periods of industry-wide distress and this can explain a lower stock price response to divestment announcements during these periods. If assets are sold to non-industry buyers during periods of economy-wide distress this provides evidence of potential financing benefits from selling assets to financially stronger buyers that are not subject the financial distress conditions affecting the divesting firm (Borisova et al., 2013). This allows us to provide direct evidence on the competing financing and fire sale hypotheses by examining who is acquiring the divested assets. We report these findings in Table 11.

[Insert Table 11 about here]

Beginning with firm-level financial distress, we find no relation between distress conditions and the relatedness of the acquiring and divesting firm. This supports the basic proposition that the divested asset is the lowest cost source of financing during a period of firm-level financial distress. In the absence of liquidity constraints across industries and the economy there should be no direct relation between firm-level financial distress and the identity of the acquiring firm.

During periods of industry distress we find no relation in Panels A and B between the operating industry of the divested unit and the acquiring firm/unit. However, we do find in Panels C and D that divesting parent firms are more likely to sell assets to acquiring firms/units in the same industry during periods of industry-wide distress (IND 1 in panel C and IND 1 and 2 in panel D). If same-industry acquiring firms are subject to the same industry-level financial distress conditions we

expect there are fewer buyers for the divested assets and divested assets are more likely to be subject to the resulting fire sale discounts.

Panels A and B also point to strong potential source of financing benefits during periods of economy-wide distress. The divested unit is significantly less likely to share the 2-digit SIC code of the acquiring firm/unit during periods of economy-wide distress in comparison to non-distressed periods. We interpret this finding as showing that during periods of economy-wide distress, assets can be sold-off to non-industry acquirers that are unlikely to be subject to the financing constraints facing the divesting firm. This supports the general framework outlined in Borisova et al. (2013) to explain the role of outside, in their case foreign, acquiring firms as liquidity providers in the market for divested assets.

We extend this analysis in Table 12 to directly examine the impact of relatedness between the divesting firm/unit and the acquiring parent firm in explaining the stock price response to asset divestments. We focus here on the relatedness between the divested assets and the acquiring parent firm.[19] Panel A reports our findings for the full sample. We find weak evidence in Model 1 that announcement period returns are higher surrounding divestments where the acquiring parent and divested unit share the same 2-digit SIC code. This supports the fit/focus hypothesis developed in John and Ofek (1995).

[Insert Table 12 about here]

Table 12 shows that the significance of our results surrounding industry-wide financial distress are restricted to divestments where the selling unit/parent operates in a different 2-digit SIC industry to the acquiring parent (Models 4 and 6). We interpret this result as supportive of the fire

[19] Our results are generally unchanged when we examine other combinations of relatedness between the divesting firm/unit and the acquiring firm/unit

sale theory. When divesting firms are forced to sell assets to non-industry firms, these acquiring firms attach a lower value to the asset and are willing to pay a lower price for the purchased asset (Shleifer and Vishny, 1992). Stockholders in the divesting firm recognize this at the time of the divestment announcement and react less positively to the announcement. This provides direct support for our explanation of the source of fire sale costs during industry-wide distress. Abnormal returns are lower when firms sell core assets and when assets are sold to non-industry buyers during industry-wide distress conditions.

Turning now to economy-wide distress, we find weak evidence in Model 8 that divestments to non-industry acquiring firms drive the positive stock price response to asset divestment announcements. This supports our previous explanation that financing benefits to divestments during periods of economy-wide distress can be derived from selling assets to deep pocketed acquiring firms. So long as the economy-wide shock is less than perfectly positively correlated across firms and industries there can be a sufficient number of non-distressed acquiring firms who can acquire the divested assets and reduce the liquidity discount associated with fire sale conditions during periods of industry-wide distress.

We extend this analysis in Panel B of Table 12 where we consider the sub-sample of small divesting firms previously identified in Table 9 as being an important source of gains during periods of economy-wide distress. Focusing on small firms sharpens our findings. The coefficient on our ECON dummy variables highlights announcement period abnormal returns that are 2.19% higher during periods of economy-wide distress within the sub-sample of small firms. We find no consistent evidence that financing benefits to firm-level and fire sale costs during periods of industry-wide distress are stronger for small firms in Models 1 to 6 of Panel B.

Overall, the evidence presented in Tables 11 and 12 support our explanation of the financing benefits to asset divestments during periods of economy-wide distress. The divested unit is more

likely to be sold to a non-industry acquiring unit or parent. As long as economy-wide distress is less than perfectly correlated across industries then acquiring firms are less likely to be financially constrained and can bid up the price of the divested assets to reduce or eliminate the liquidity discounts associated with fire sale conditions. These findings are most pronounced within the sub-sample of small firms that we identify as most likely to be financially constrained and for whom the financing benefits to the divestment are expected to be largest.

4.5.3. Deal size

The descriptive statistics presented in Table 3 highlight that deal size (DSIZE) is higher for divestments during periods of industry-wide distress, and is unrelated to firm-level and economy-wide distress conditions. Thus far, we have omitted a control for relative deal size from our regressions given its limited reporting in SDC Platinum. However, Lang et al. (1995) and Lasfer et al. (1996) find that CARs surrounding divestments increase with deal size. Therefore, we re-estimate our main regressions with additional controls for DSIZE and an interaction term between DSIZE and our four financial distress conditions. We propose that deal size can magnify the positive financing and negative fire sale effects of divestments. Following Lang et al. (1995), we expect a positive relation between deal size and CARs during non-distress periods.

We present these results in Table 13 and find that DSIZE is positively related to CARs in all models. The positive coefficient for DSIZE is consistent Lang et al. (1995), where gains to asset divestments are increasing with the relative size of the divested asset.

[Insert Table 13 about here]

Inclusion of the interaction term between deal size and financial distress causes our industry-wide distress variables to lose their statistical significance, but the interaction of DSIZE and industry-wide distress (IND 1) is significant and negative in Model 2.[20] This highlights that, conditional on industry-wide distress conditions and the resulting fire sale costs, larger divestments are associated with larger fire sale discounts.[21] We find no significant interaction effect between economy-wide distress and deal size surrounding divestment announcements and economy-wide distress is positively related to abnormal returns. Firm size remains negatively related to abnormal returns in all regression models.

Our findings in Tables 3 and 13 highlight an important additional aspect to fire sale discounts for divesting firms during periods of industry-wide distress. Our findings here show that deal size magnifies fire sale costs for divesting firms during periods of industry-wide distress. Divestments during industry-wide distress periods involve the sale of relatively larger assets at precisely the time when the market for those assets is expected to be least liquid because the natural buyers of these assets experience their own financing constraints.

5. Conclusions

In this study we investigate how the stock price response to asset divestment announcements varies with financial distress conditions at the level of the individual firm, the operating industry, and economy-wide. We analyze a large sample of divestments by UK firms between 1988 and 2009 that covers significant variation in firm-level, industry-wide, and economy-wide distress conditions.

[20] It is specifically the inclusion of the interaction variables between deal size and distress that leads to our industry-wide distress measures losing significance. When we re-estimate our regression models from Table 5 with only the additional control for deal size, industry-wide distress remains negative and significantly related to abnormal returns at the 5% level or better.

[21] This result is again driven by the sub-sample of low debt capacity divesting firms.

We contribute to the literature on asset divestments by isolating the impact of specific and overlapping distress conditions on how markets respond to these announcements and by examining how firm and deal characteristics interact with these factors. This approach allows us to examine fire sale explanations, as distinct from financing explanations of divestment announcements. Conflicting results on the importance of these factors in explaining the market reaction across sample time periods and definitions of financial distress motivate our investigation.

Our results consistently find that the market reaction to divestment announcements during periods of industry-wide distress is significantly lower than for non-distressed firms, which supports the fire sale explanation of asset sales. During periods of industry-wide distress the natural buyers of the divested asset are likely to also be distressed, which increases the likelihood of asset purchases by low-value users who are expected to pay a lower price for the divested asset.

Our analysis of overlapping distress conditions highlights the importance of identifying distinct periods of financial distress when examining corporate restructuring transactions. We do not find a relation between firm-level and economy-wide distress in isolation and CARs surrounding divestment announcements. We show that fire sale costs surrounding industry-wide distress, and in the absence of overlapping firm-level and economy-wide distress, are economically larger than understood in prior studies that fails to isolate the impact of distinct financial distress conditions. When firms divest assets during periods of industry-wide and firm-level distress, the stock price response to asset divestments is insignificant, which suggests that financing and fire sale effects offset.

We find support for the financing hypothesis whereby the stock price response to divestment announcements is higher during periods of overlapping firm-level and economy-wide distress. This arises when firms divesting assets to alleviate financial distress at the firm-level benefit from selling assets to non-distressed acquiring firms who can provide liquidity in the market for

divested assets given imperfect correlation of distress conditions across industries (Borisova et al. 2013).

We also find that the effect of distress conditions on CARs to divestment announcements is restricted to specific firm and deal characteristics including low debt capacity, the sale of core assets, and small firms. Fire sale discounts during industry-wide distress are driven by divestment of the core assets subject to industry-wide distress, small divesting firms, and divestments by financially constrained firms that are likely to be forced to sell assets under pressure from creditors. Financing benefits during periods of economy-wide distress are restricted to assets purchased by non-industry acquiring firms made by small, and potentially financially constrained, divesting firms.

Analyzing the role of financial distress conditions in the determinants of asset divestments relative to other types of corporate restructuring is a potentially fruitful area for future research. Schlingemann et al. (2002) find that the liquidity of the market for divested assets is a major determinant of asset divestments. We expect that firm-level, industry-wide, and economy-wide distress conditions can impact the liquidity of the market for corporate assets. This can also lead firms to engage in other non-cash generating corporate restructuring activities, such as employee layoffs and accounting write downs of firm assets (see Marshall et al., 2012). Examining the buyers of divested assets would also be an interesting extension of this study. On the one hand, divesting assets at discounted prices during periods of industry-wide distress can allow for a buyers' market and generate abnormal returns for acquiring firms. On the other, Shleifer and Vishny (1992) propose that under fire sale conditions industry-specific assets are more likely to be sold to low-value and non-industry users, for whom a discounted price from the seller's perspective represents a fair price. Examining the role of financial distress conditions, buyer identity, and asset type in divestment decisions from the buyer and sellers' perspective is worthy of further study.

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Table 1
Variable definitions

Variable	Variable reference	Description
Panel A: Distress conditions		
Firm-level distress	FIRM	A dummy variable set equal to one if the divestment is made by a firm reporting negative net income before extraordinary items and preferred dividends in the financial year prior to the divestment announcement, and zero otherwise.
Industry-wide distress	IND 1	A dummy variable set equal to one if the divestment takes places during a calendar year where the median stock price return of all firms in the Datastream level 6 industry group is less than -30%, and zero otherwise.
	IND 2	A dummy variable set equal to one if IND 1 equals one and the median revenue growth for all firms in the Datastream level 6 industry group is negative during the calendar year of the divestment, and zero otherwise.
Economy-wide distress	ECON	A dummy variable set equal to one if the divestment takes places during a recessionary quarter, and zero otherwise. A recession is defined using the UK Government's Treasury definition of two or more consecutive quarters of declining real GDP.
Panel B: Control variables		
Firm size	FSIZE	Book value of total assets in £000s inflated to 2009 at consumer price inflation.
Deal size	DSIZE	Price received for divested asset divided by book value of total assets at the financial year-end prior to the divestment announcement.
Growth opportunities	MTB	Market value of equity divided by book value of equity.
Related divestment	RELATE	A dummy variable set equal to one if the divested asset is in the same two-digit SIC industry code as the parent firm, and zero otherwise.
Repeat divestment	CLUSTER	A dummy variable set equal to one if the divesting firm had announced another divestment in the 180 days prior to the divestment announcement, and zero otherwise.
Low debt capacity	CAPLO	A dummy variable set equal to one if the divesting firm had a leverage ratio above the industry median and a current ratio below the industry median, and zero otherwise. Industry medians are derived from Datastream level 6 industry groups. Leverage is defined as book value of total debt divided by book value of total assets. The current ratio is defined as current assets divided by current liabilities.

Table 2
Divestment frequency and financial distress conditions

Panel A: Divestment frequency and financial distress conditions over time

Year	Divestment frequency	FIRM	IND 1	IND 2	ECON
1988	323	49	1	0	0
1989	477	116	0	0	0
1990	491	145	89	10	256
1991	515	136	5	0	389
1992	489	93	29	8	0
1993	507	69	0	0	0
1994	491	80	0	0	0
1995	524	91	0	0	0
1996	564	82	0	0	0
1997	646	87	0	0	0
1998	672	127	33	12	0
1999	671	153	0	0	0
2000	704	214	49	43	0
2001	606	225	177	76	0
2002	461	157	130	106	0
2003	499	127	0	0	0
2004	371	62	1	0	0
2005	324	58	0	0	0
2006	341	71	14	14	0
2007	388	87	6	3	0
2008	343	141	314	74	274
2009	311	82	0	0	158
Total	10,718	2,452	848	346	1,077

Panel B: Divestment frequency for firms experiencing overlapping distress conditions

	Divestment frequency	
	IND 1	IND 2
Firm, industry-wide and economy-wide distress	122	23
Firm and industry-wide distress	185	97
Firm and economy-wide distress	217	316
Firm distress only	1,928	2,016
Industry-wide and economy-wide distress	189	38
Industry-wide distress only	352	188
Economy-wide distress only	549	700
No distress conditions	7,176	7,340
Total	10,718	10,718

The table presents summary statistics for a sample of divestment announcements by UK firms from 1988 to 2009. The sample consists of non-financial and non-utility firms in the FTSE All-Share Index of the London Stock Exchange. Measures of financial distress are defined in Table 1. The exclusion of a distress category in Panel B denotes that the divestment took place during non-distress conditions in that category.

Table 3
Firm and deal characteristics for distressed and non-distressed divestment announcements

Variable	Distressed Mean [Median]	Non-distressed Mean [Median]	T-test of means [Mann-Whitney-Wilcoxon test of medians]
Panel A: FIRM			
Number of announcements	2,452	8,266	
FSIZE	8,801 [1,054]	6,903 [880]	3.80*** [1.88]*
DSIZE	0.100 [0.020]	0.097 [0.021]	0.28 [-1.32]
MTB	2.728 [1.546]	2.861 [1.698]	-0.64 [-4.93]***
RELATE	0.405	0.396	0.812
CLUSTER	0.574	0.565	0.745
CAPLO	0.418	0.407	0.885
Panel B: IND 1			
Number of announcements	848	9,870	
FSIZE	9,660 [511]	9,146 [938]	3.15*** [-5.30]***
DSIZE	0.176 [0.033]	0.092 [0.020]	6.66*** [4.52]***
MTB	4.846 [1.707]	2.668 [1.656]	6.65*** [0.44]
RELATE	0.466	0.392	4.21***
CLUSTER	0.485	0.574	-4.99***
CAPLO	0.385	0.411	-1.46
Panel C: IND 2			
Number of announcements	346	10,372	
FSIZE	15,100 [425]	7,081 [930]	6.69*** [-4.03]***
DSIZE	0.183 [0.037]	0.095 [0.021]	4.64*** [3.53]***
MTB	5.840 [1.703]	2.731 [1.662]	6.34*** [0.14]
RELATE	0.405	0.398	0.26
CLUSTER	0.535	0.568	-1.24
CAPLO	0.408	0.409	-0.04
Panel D: ECON			
Number of announcements	1,077	9,641	
FSIZE	7,201 [1,105]	7,348 [887]	-0.21 [0.34]
DSIZE	0.107 [0.020]	0.097 [0.021]	0.78 [-0.34]
MTB	2.251 [1.531]	2.896 [1.694]	-2.25** [-3.01]***
RELATE	0.469	0.390	5.023***
CLUSTER	0.561	0.568	-0.451
CAPLO	0.498	0.400	5.44***

The table presents summary statistics and differences in means and medians across distressed and non-distressed firms for our sample of divestment announcements. Medians are reported in brackets below means. The significance of the difference in sample means is determined using a two-sample t-test. The significance of the differences in medians is determined in using the Mann-Whitney-Wilcoxon test. All variables are defined in Table 1. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 4
Cumulative abnormal returns surrounding divestment announcements and financial distress conditions

Financial distress measure	FIRM	IND 1	IND 2	ECON
Distressed	1.05% (9.64)*** [2,452]	-0.03% (-0.06) [848]	-0.66% (-1.66)* [346]	1.08% (4.60)*** [1,077]
Non-distressed	0.74% (12.68)*** [8,266]	0.94% (11.54)*** [9,870]	0.91% (15.82)*** [10,372]	0.84% (15.19)*** [9,641]
Difference	0.31% (1.00)	-0.96% (-3.19)***	-1.57% (-2.40)**	0.24% (0.69)

The table reports average thee-day cumulative abnormal returns (CARs) surrounding asset divestment announcements categorized by individual financial distress conditions. CARs are measured over the three-day event window beginning one day prior to the announcement date, day zero. Measures of financial distress are defined in Table 1. T-statistics are shown in parenthesis and the number of observations is shown in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 5
Regressions of cumulative abnormal returns surrounding divestment announcements and financial distress

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	OLS	Treatment	OLS	Treatment	OLS	Treatment	OLS	Treatment
FIRM	0.0016	0.0040						
	(0.75)	(1.76)*						
IND 1			-0.0092	-0.0101				
			(-2.66)**	(-2.78)***				
IND 2					-0.0159	-0.0135		
					(-2.43)**	(-2.64)**		
ECON							0.0048	0.0070
							(1.44)	(1.72)*
LAMBDA		0.0134		0.0137		0.0147		0.0135
		(1.42)		(1.42)		(1.55)		(1.46)
LN (FSIZE)	-0.0023	-0.0027	-0.0024	-0.0027	-0.0024	-0.0027	-0.0023	-0.0027
	(-3.54)***	(-3.57)***	(-3.61)***	(-3.59)***	(-3.66)***	(-3.59)***	(-3.55)***	(-3.57)***
MTB	-0.0001	-0.0002	-0.0001	-0.0002	-0.0001	-0.0002	-0.0001	-0.0002
	(-0.33)	(-1.57)	(-0.29)	(-1.43)	(-0.28)	(-1.51)	(-0.32)	(-1.56)
RELATE	0.0004	-0.0013	0.0007	-0.0011	0.0005	-0.0012	0.0003	-0.0014
	(0.26)	(-0.72)	(0.40)	(-0.62)	(0.30)	(-0.71)	(0.18)	(-0.78)
CLUSTER	0.0012	0.0018	0.0010	0.0016	0.0012	0.0018	0.0012	0.0018
	(0.58)	(0.74)	(0.51)	(0.68)	(0.60)	(0.75)	(0.58)	(0.77)
Intercept	0.0390	0.0192	0.0405	0.0206	0.0404	0.0185	0.0389	0.0191
	(4.62)***	(1.20)	(4.70)***	(1.23)	(4.72)***	(1.14)	(4.54)***	(1.22)
Number of observations	9,713	7,459	9,713	7,459	9,713	7,459	9,713	7,459
Adjusted-R^2	0.005	0.007	0.006	0.008	0.006	0.007	0.005	0.007
F-statistic	4.86***	4.46***	5.13***	4.64***	5.72***	4.04***	5.43***	4.87***

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements against individual measures of financial distress conditions and control variables. All variables are defined in Table 1. Heckman treatment regressions are estimated using a two-step procedure. LAMBDA is the inverse Mills ratio derived from probit regressions of the propensity to divest assets in Appendix B. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 6
Regressions of cumulative abnormal returns surrounding divestment announcements and financial distress conditioned by debt capacity of divesting firms

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Full Sample	CAPLO =1	CAPLO =0	Full Sample	CAPLO =1	CAPLO =0	Full Sample	CAPLO =1	CAPLO =0	Full Sample	CAPLO =1	CAPLO =0
FIRM	0.0035	0.0080	0.0001									
	(1.55)	(2.33)***	(0.07)									
IND 1				-0.0118	-0.0171	-0.0078						
				(-2.78)***	(-3.05)***	(-1.41)						
IND 2							-0.0195	-0.0276	-0.0018			
							(-2.63)**	(-3.36)***	(-1.01)			
ECON										0.0067	0.0100	0.0028
										(1.56)	(1.50)	(0.54)
CAPLO	0.0021			0.0021			0.0022			0.0019		
	(0.89)			(0.90)			(0.96)			(0.82)		
LN (FSIZE)	-0.0026	-0.0034	-0.0020	-0.0026	-0.0034	-0.0020	-0.0026	-0.0035	-0.0021	-0.0026	-0.0034	-0.0020
	(-3.68)***	(-2.48)**	(-2.60)**	(-3.81)***	(-2.45)**	(-2.74)***	(-3.85)***	(-2.52)**	(-2.76)***	(-3.68)***	(-2.46)**	(-2.60)**
MTB	0.0000	0.0010	-0.0004	0.0001	0.0010	-0.0004	0.0001	0.0010	-0.0004	0.0000	0.0010	-0.0004
	(0.07)	(0.94)	(-1.90)*	(0.13)	(0.97)	(-1.92)*	(0.14)	(0.95)	(-1.94)*	(0.07)	(0.94)	(-1.88)*
RELATE	-0.0013	-0.0026	0.0001	-0.0011	-0.0025	0.0003	-0.0013	-0.0030	0.0001	-0.0014	-0.0028	0.0001
	(-0.73)	(-0.95)	(0.04)	(-0.61)	(-0.93)	(0.12)	(-0.75)	(-1.07)	(0.06)	(-0.78)	(-1.05)	(0.03)
CLUSTER	0.0012	0.0050	-0.0009	0.0010	0.0044	-0.0010	0.0013	0.0048	-0.0008	0.0013	0.0048	-0.0008
	(0.55)	(1.16)	(-0.33)	(0.47)	(1.07)	(-0.36)	(0.58)	(1.16)	(-0.32)	(0.59)	(1.17)	(-0.32)
Intercept	0.0425	0.0507	0.0374	0.0447	0.0538	0.0386	0.0443	0.0539	0.0381	0.0425	0.0513	0.0371
	(4.66)***	(2.88)***	(3.55)***	(4.87)***	(2.97)***	(3.77)***	(4.89)***	(3.04)***	(3.80)***	(4.60)***	(2.88)***	(3.54)***
Number of observations	7,996	3,235	4,761	7,996	3,235	4,761	7,996	3,235	4,761	7,996	3,235	4,761
Adjusted-R^2	0.006	0.016	0.007	0.007	0.017	0.008	0.008	0.018	0.008	0.006	0.016	0.007
F-statistic	3.84***	2.64**	3.10**	4.19***	2.65**	3.12**	4.82***	4.29***	3.31**	4.11***	1.85	3.05**

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements against individual measures of financial distress conditions and control variables, conditioned by debt capacity of the divesting firms. All variables are defined in Table 1. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 7
Cumulative abnormal returns surrounding divestment announcements and overlapping financial distress conditions

	CAR	Difference to no distress conditions sample	CAR	Difference to no distress conditions sample
	Panel A: IND 1		*Panel B: IND 2*	
Firm, industry-wide and economy-wide distress	1.12% (0.77) [122]	0.18% (0.25)	3.12% (2.54)** [23]	2.19% (1.31)
Firm and industry-wide distress	0.54% (0.82) [185]	-0.40% (-0.67)	0.97% (1.23) [97]	0.04% (0.04)
Firm and economy-wide distress	1.99% (2.77)*** [217]	1.05% (1.91)*	1.57% (3.97)*** [316]	0.64% (1.35)
Firm distress only	0.76% (4.23)*** [1,928]	-0.18% (-0.86)	0.73% (6.52)*** [2,016]	-0.20% (-1.00)
Industry-wide and economy-wide distress	-0.31% (-0.32) [189]	-1.24% (-2.08)**	-1.77% (-1.39) [38]	-2.70% (-2.06)**
Industry-wide distress only	-0.57% (-0.97) [352]	-1.50% (-3.39)***	-1.73% (-3.57)*** [188]	-2.66% (-2.93)***
Economy-wide distress only	1.19% (3.05)*** [549]	0.25% (0.71)	0.94% (3.29)*** [700]	0.01% (0.03)
No distress conditions	0.93% (9.97)*** [7,176]		0.93% (15.11)*** [7,340]	

The table reports average thee-day cumulative abnormal returns (CARs) surrounding asset divestment announcements categorized by overlapping financial distress conditions. CARs are measured over the three-day event window beginning one day prior to the announcement date, day zero. Measures of financial distress are defined in Table 1. T-statistics are shown in parenthesis and the number of observations is shown in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 8
Regressions of cumulative abnormal returns surrounding divestment announcements and overlapping financial distress conditions

	(1)	(2)	(3)	(4)	(5)	(6)
	Full Sample	CAPLO = 1	CAPLO = 0	Full Sample	CAPLO = 1	CAPLO = 0
		Panel A: IND 1			*Panel B: IND 2*	
FIRM + IND + ECON	0.0129	0.0247	0.0023	0.0210	-0.0149	0.0515
	(0.91)	(1.03)	(0.17)	(0.87)	(-0.76)	(1.29)
FIRM + IND	0.0017	0.0104	-0.0091	0.0076	0.0054	0.0023
	(0.34)	(1.16)	(-1.01)	(1.13)	(0.64)	(0.35)
FIRM + ECON	0.0093	0.0325	-0.0078	0.0100	0.0320	-0.0091
	(1.13)	(1.80)*	(-0.74)	(1.50)	(2.39)**	(-1.28)
FIRM	-0.0009	0.0014	0.0008	-0.0008	0.0026	-0.0001
	(-0.43)	(0.42)	(0.29)	(-0.40)	(0.75)	(-0.04)
IND + ECON	-0.0115	-0.0334	0.0068	-0.0320	-0.0636	0.0017
	(-1.23)	(-1.68)*	(0.53)	(-1.22)	(-0.95)	(0.04)
IND	-0.0212	-0.0374	-0.0169	-0.0286	-0.0368	-0.0296
	(-2.45)**	(-2.69)***	(-2.53)**	(-2.24)**	(-3.62)***	(-1.88)*
ECON	0.0051	0.0107	0.0030	0.0030	0.0037	0.0046
	(1.31)	(1.21)	(0.49)	(0.96)	(0.57)	(0.76)
LN (FSIZE)	-0.0024	-0.0035	-0.0021	-0.0024	-0.0035	-0.0021
	(-3.70)***	(-2.56)**	(-2.82)***	(-3.68)***	(-2.61)**	(-2.76)***
MTB	-0.0001	0.0010	-0.0003	-0.0001	0.0010	-0.0003
	(-0.25)	(0.94)	(-1.90)*	(-0.25)	(0.93)	(-1.92)*
RELATE	0.0003	-0.0031	0.0001	0.0003	-0.0033	-0.0001
	(0.20)	(-1.16)	(0.04)	(0.16)	(-1.21)	(0.03)
CLUSTER	0.0010	0.0046	-0.0008	0.0013	0.0052	-0.0004
	(0.50)	(1.16)	(-0.32)	(0.64)	(1.28)	(-0.18)
Intercept	0.0406	0.0533	0.0386	0.0400	0.0528	0.0378
	(4.82)***	(2.99)***	(3.84)***	(4.78)***	(3.05)***	(3.79)***
Number of observations	9,713	3,235	4,761	9,713	3,235	4,761
Adjusted-R^2	0.008	0.026	0.001	0.008	0.024	0.012
F-statistic	3.21***	3.08***	1.75*	4.43***	8.17***	2.32**

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements against overlapping financial distress conditions and control variables. To define overlapping financial distress conditions we use only the included dummy variables for each distress condition. For example, the coefficient FIRM + IND + ECON indicates that the divestment announcement took place under firm-level, industry-wide, and economy-wide financial distress conditions simultaneously. IND indicates that the divestment took place during industry-wide distress conditions, but the economy and the announcing firm were not distressed at the time of the announcement. Abnormal returns are tested against the group of announcements where the firm, the industry, and the economy are classified as not experiencing financial distress at the time of the announcement. All variables are defined in Table 1. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 9
Regressions of cumulative abnormal return surrounding divestment announcements conditioned by firm size

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Large	Small	Large	Small	Large	Small	Large	Small
FIRM	0.0019	0.0012						
	(1.09)	(0.30)						
IND 1			-0.0076	-0.0110				
			(-1.25)	(-2.19)**				
IND 2					-0.0113	-0.0194		
					(-1.25)	(-2.10)**		
ECON							-0.0031	0.0130
							(-1.08)	(2.01)**
LN (FSIZE)	-0.0023	-0.0025	-0.0022	-0.0027	-0.0022	-0.0027	-0.0023	-0.0025
	(-4.00)***	(-1.26)	(-3.98)***	(-1.34)	(-3.89)***	(-1.35)	(-3.98)***	(-1.23)
MTB	-0.0002	-0.0001	-0.0002	-0.0001	-0.0002	-0.0000	-0.0002	-0.0001
	(-2.19)**	(-0.17)	(-2.35)**	(-0.10)	(-2.26)**	(-0.09)	(2.25)**	(-0.15)
RELATE	0.0011	-0.0002	0.0012	0.0001	0.0011	-0.0001	0.0012	-0.0003
	(0.50)	(-0.07)	(0.54)	(0.06)	(0.50)	(-0.03)	(0.56)	(-0.12)
CLUSTER	-0.0020	0.0034	-0.0023	0.0034	-0.0021	0.0036	-0.0021	0.0033
	(-1.13)	(1.11)	(-1.33)	(1.08)	(-1.19)	(1.15)	(-1.20)	(1.07)
Intercept	0.0414	0.0406	0.0409	0.0438	0.0404	0.0434	0.0417	0.0389
	(4.92)***	(1.74)*	(5.06)***	(1.85)*	(4.96)***	(1.86)*	(4.93)***	(1.66)
Number of observations	4,850	4,863	4,850	4,863	4,850	4,863	4,850	4,863
Adjusted-R^2	0.005	0.002	0.006	0.002	0.006	0.003	0.005	0.003
F-statistic	9.24***	0.55	11.60***	1.76	10.27***	1.45	9.46***	1.53

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements against individual measures of financial distress conditions and control variables, conditioned by firm size. All variables are defined in Table 1. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 10
Regressions of cumulative abnormal returns surrounding divestment announcements and financial distress conditioned by relatedness of divested asset and parent firm

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	RELATE = 1	RELATE = 0	RELATE = 1	RELATE = 0	RELATE = 1	RELATE = 0	RELATE = 1	RELATE = 0
FIRM	0.0035	0.0003						
	(0.99)	(0.14)						
IND 1			-0.0120	-0.0068				
			(-2.22)**	(-1.76)*				
IND 2					-0.0255	-0.0092		
					(-2.66)**	(-1.30)		
ECON							0.0020	0.0071
							(0.37)	(1.60)
LN (FSIZE)	-0.0021	-0.0025	-0.0022	-0.0025	-0.0022	-0.0025	-0.0021	-0.0024
	(-2.73)***	(-2.89)***	(-2.81)***	(-2.94)***	(-2.85)***	(-2.93)***	(-2.75)***	(-2.86)***
MTB	-0.0002	-0.0001	-0.0002	-0.0000	-0.0002	-0.0000	-0.0002	-0.0001
	(-0.99)	(-0.08)	(-0.89)	(-0.06)	(-0.89)	(-0.06)	(-1.00)	(-0.07)
CLUSTER	0.0010	0.0012	0.0007	0.0012	0.0009	0.0013	0.0010	0.0012
	(0.36)	(0.46)	(0.26)	(0.45)	(0.33)	(0.49)	(0.39)	(0.45)
Intercept	0.0367	0.0408	0.0396	0.0415	0.0397	0.0413	0.0374	0.0399
	(3.47)***	(3.88)***	(3.75)***	(3.90)***	(3.79)***	(3.88)***	(3.56)***	(3.73)***
Number of observations	3,869	5,844	3,869	5,844	3,869	5,844	3,869	5,844
Adjusted-R^2	0.005	0.005	0.006	0.006	0.007	0.006	0.004	0.006
F-statistic	2.89**	4.11***	4.20***	4.20***	5.06***	4.16***	2.37*	5.13***

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements against individual measures of financial distress conditions and control variables, conditioned by the relatedness of the divested asset and parent firm. All variables are defined in Table 1. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 11
Proportion of related divestments between buyer and selling firm conditioned on financial distress conditions

	Distressed	Non-distressed	t-test difference
Panel A: Seller unit – Buyer unit			
FIRM	0.3933 [3,087]	0.3987 [10,359]	0.5413
IND1	0.3860 [1,070]	0.3984 [12,376]	0.8019
IND2	0.3755 [514]	0.3983 [12,932]	1.0467
ECON	0.3632 [1,382]	0.4014 [12,064]	2.7844***
Panel B: Seller unit – Buyer parent			
FIRM	0.3341 [3,047]	0.3411 [10,220]	0.7177
IND1	0.3372 [1,047]	0.3396 [12,220]	0.1664
IND2	0.3347 [505]	0.3397 [12,762]	0.2345
ECON	0.3104 [1,350]	0.3428 [11,917]	2.4327**
Panel C: Seller parent – Buyer unit			
FIRM	0.2710 [3,096]	0.2629 [10,369]	-0.8912
IND1	0.3016 [1,071]	0.2616 [12,394]	-2.7450***
IND2	0.2802 [514]	0.2641 [12,951]	-0.7923
ECON	0.2715 [1,385]	0.2640 [12,080]	-0.5940
Panel D: Seller parent – Buyer parent			
FIRM	0.2569 [3,056]	0.2497 [10,229]	-0.7998
IND1	0.2923 [1,047]	0.2478 [12,238]	-3.0443***
IND2	0.2911 [505]	0.2498 [12,780]	-2.0066**
ECON	0.2604 [1,352]	0.2503 [11,933]	-0.7981

The table reports the proportion of related divesting and acquiring firms/units where the divesting firm and or unit are identified as sharing the same 2-digit SIC code as the acquiring firm/unit and results are separated between financial distress and non-distress conditions. We identify SIC codes for the divesting firm/unit and acquiring firm/unit from SDC Platinum. Related divestments are identified as those where the seller and buyer share the same 2-digit SIC code. The proportion of total divestments that are related is reported above the number of observations in brackets. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 12
Regressions of cumulative abnormal returns surrounding divestment announcements conditioned on buyer-seller relatedness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Related	Unrelated	Related	Unrelated	Related	Unrelated	Related	Unrelated
Panel A: Seller unit – Buyer parent								
FIRM	0.0054	-0.0005						
	(1.83)*	(-0.17)						
IND1			-0.0098	-0.0088				
			(-1.58)	(-2.02)**				
IND2					-0.0060	-0.0207		
					(-0.54)	(-2.35)**		
ECON							-0.0029	0.0087
							(-0.53)	(1.70)*
LN (FSIZE)	-0.0023	-0.0024	-0.0024	-0.0025	-0.0024	-0.0025	-0.0023	-0.0024
	(-2.99)***	(-2.78)***	(-3.11)***	(-2.82)***	(-3.04)***	(-2.88)***	(-3.01)***	(-2.79)***
MTB	0.0000	-0.0002	0.0000	-0.0002	0.0000	-0.0002	-0.0000	-0.0002
	(0.00)	(-0.37)	(0.11)	(-0.34)	(0.03)	(-0.32)	(-0.02)	(-0.35)
RELATE	0.0042	-0.0017	0.0046	-0.0016	0.0043	-0.0018	0.0043	-0.0020
	(1.53)	(-0.83)	(1.65)	(-0.77)	(1.56)	(-0.84)	(1.57)	(-0.98)
CLUSTER	0.0049	-0.0010	0.0048	-0.0011	0.0049	-0.0008	0.0049	-0.0010
	(1.47)	(-0.38)	(1.44)	(-0.42)	(1.47)	(-0.30)	(1.48)	(-0.39)
Intercept	0.0341	0.0427	0.0367	0.0437	0.0356	0.0441	0.0355	0.0418
	(3.23)***	(3.75)***	(3.49)***	(3.74)***	(3.36)***	(3.79)***	(3.39)***	(3.64)***
Number of observations	3,337	6,223	3,337	6,223	3,337	6,223	3,337	6,223
Adjusted-R^2	0.007	0.005	0.007	0.006	0.006	0.007	0.006	0.006
F-statistic	2.323*	3.513***	3.731***	3.387***	2.767**	3.570***	3.067**	4.612***
Panel B: Seller unit – Buyer parent; Small firms only								
FIRM	0.0036	0.0000						
	(0.71)	(0.00)						
IND1			-0.0183	-0.0076				
			(-1.84)*	(-0.93)				
IND2					-0.0068	-0.0260		
					(-0.44)	(-1.81)*		
ECON							-0.0078	0.0219
							(-0.82)	(2.71)***
LN (FSIZE)	-0.0021	-0.0028	-0.0025	-0.0029	-0.0022	-0.0030	-0.0021	-0.0026
	(-0.90)	(-1.16)	(-1.08)	(-1.18)	(-0.95)	(-1.24)	(-0.92)	(-1.08)
MTB	0.0001	-0.0002	0.0002	-0.0002	0.0002	-0.0001	0.0001	-0.0002
	(0.53)	(-0.28)	(0.81)	(-0.25)	(0.58)	(-0.21)	(0.51)	(-0.25)
RELATE	0.0040	-0.0017	0.0047	-0.0016	0.0041	-0.0017	0.0042	-0.0019
	(0.79)	(-0.49)	(0.95)	(-0.46)	(0.81)	(-0.49)	(0.85)	(-0.54)
CLUSTER	0.0077	0.0011	0.0076	0.0011	0.0078	0.0015	0.0078	0.0008
	(1.77)*	(0.29)	(1.76)*	(0.29)	(1.78)*	(0.40)	(1.80)*	(0.23)
Intercept	0.0295	0.0462	0.0357	0.0481	0.0315	0.0493	0.0313	0.0421
	(1.03)	(1.63)	(1.26)	(1.65)	(1.11)	(1.72)*	(1.11)	(1.48)
Number of observations	1,567	3,261	1,567	3,261	1,567	3,261	1,567	3,261
Adjusted-R^2	0.004	0.002	0.007	0.002	0.004	0.004	0.004	0.006
F-statistic	1.255	0.562	3.061**	0.618	1.719	1.032	1.583	2.343*

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements for small firms against individual measures of financial distress conditions and control variables, and conditioned by the relatedness of the buyer and seller of the assets. All variables are defined in Table 1. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Table 13
Regressions of cumulative abnormal returns surrounding divestment announcements, deal size and financial distress conditions

	(1)	(2)	(3)	(4)
FIRM	0.0017			
	(0.76)			
IND 1		-0.0024		
		(-0.61)		
IND 2			-0.0017	
			(-0.36)	
ECON				0.0096
				(2.72)***
DSIZE	0.0206	0.0255	0.0188	0.0217
	(2.18)**	(2.72)***	(1.70)*	(2.47)**
DSIZE * FIRM	-0.0215			
	(-1.52)			
DSIZE * IND 1		-0.0490		
		(-2.16)***		
DSIZE * IND 2			-0.0350	
			(-1.30)	
DSIZE * ECON				-0.0554
				(-1.44)
LN (FSIZE)	-0.0024	-0.0023	-0.0024	-0.0023
	(-3.54)***	(-3.53)***	(-3.54)***	(-3.42)***
MTB	-0.0002	-0.0002	-0.0002	-0.0002
	(-1.25)	(-1.03)	(-1.15)	(-1.21)
RELATE	0.0004	0.0005	0.0003	0.0004
	(0.31)	(0.40)	(0.22)	(0.30)
CLUSTER	0.0028	0.0027	0.0028	0.0027
	(1.29)	(1.24)	(1.33)	(1.25)
Intercept	0.0392	0.0387	0.0394	0.0376
	(4.42)***	(4.37)***	(4.34)***	(4.19)***
Number of observations	6,098	6,098	6,098	6,098
Adjusted-R^2	0.011	0.016	0.012	0.014
F-statistic	3.10***	3.28***	2.81**	4.82***

The table reports OLS regressions of three-day cumulative abnormal returns (CARs) surrounding asset divestment announcements against individual measures of financial distress conditions, control variables, and deal size. All variables are defined in Table 1. T-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.

Appendix A
Industry-wide distress and divestment announcements

DS level 6 industry	Industry code	Count	Fraction of sample	IND 1	IND 2
Exploration & Production	50	152	1.42%	1991, 1998, 2008	1998
Integrated Oil & Gas	97	395	3.69%	-	-
Oil Equipment & Services	51	71	0.66%	1992, 2002, 2008	2002
Pipelines	52	0	0.00%	-	-
Renewable Energy Equipment	74	2	0.02%	2008	-
Alternative Fuels	83	2	0.02%	2007, 2008	-
Commodity Chemicals	92	95	0.89%	-	-
Specialty Chemicals	33	462	4.31%	2008	-
Forestry	38	3	0.03%	-	-
Paper	82	21	0.20%	2008	-
Aluminum	93	0	0.00%	-	-
Nonferrous Metals	54	6	0.06%	2008	-
Iron & Steel	56	48	0.45%	2008	2008
Coal	49	14	0.13%	2008	-
Diamonds & Gemstones	89	4	0.04%	2008	2008
General Mining	122	320	2.99%	1990, 1992, 2008	1990
Gold Mining	119	28	0.26%	1988, 1990, 1992, 1997, 2001, 2008	2001
Platinum & Precious Metals	78	55	0.51%	2008	2008
Building Materials & Fixtures	30	470	4.38%	2008	-
Heavy Construction	39	138	1.29%	2008	-
Aerospace	98	113	1.05%	2008	-
Defense	44	89	0.83%	-	-
Containers & Packaging	70	113	1.05%	1998, 2008	2008
Diversified Industrials	101	187	1.74%	-	-
Electrical Components & Equipment	37	165	1.54%	2001, 2008	2001
Electronic Equipment	57	183	1.71%	2001, 2002, 2007, 2008	-
Commercial Vehicles & Trucks	117	21	0.20%	1990, 2008	-
Industrial Machinery	43	588	5.49%	2008	2008
Delivery Services	40	9	0.08%	1990, 2001	-
Marine Transportation	99	47	0.44%	2008	-
Railroads	81	0	0.00%	-	-
Transportation Services	64	171	1.60%	2008	-
Trucking	131	38	0.35%	-	-
Business Support Services	86	635	5.92%	2008	-
Business Training & Employment Agencies	134	100	0.93%	1990, 2001, 2002, 2008	2001, 2002
Financial Administration	46	54	0.50%	2008	-
Industrial Suppliers	32	92	0.86%	2008	2008
Waste & Disposal Services	47	30	0.28%	2008	2008
Automobiles	65	3	0.03%	1990, 2008	1990
Auto Parts	63	123	1.15%	2002, 2008	2002
Tires	53	0	0.00%	-	-
Brewers	67	54	0.50%	-	-
Distillers & Vintners	68	140	1.31%	2006	-
Soft Drinks	114	2	0.02%	-	-
Farming & Fishing	35	24	0.22%	2008	-
Food Products	71	795	7.42%	2008	-

Durable Household Products	59	43	0.40%	1998, 2008	1998
Nondurable Household Products	62	64	0.60%	2007, 2008	-
Furnishings	60	71	0.66%	2004, 2008	-
Home Construction	36	113	1.05%	1990, 2008	1990, 2008
Consumer Electronics	75	49	0.46%	2008	-
Recreational Products	155	11	0.10%	2000	-
Toys	61	6	0.06%	1990, 1997, 2000, 2008	-
Clothing & Accessories	69	213	1.98%	1990, 2008	2008
Footwear	153	2	0.02%	-	-
Personal Products	48	16	0.15%	-	-
Tobacco	79	92	0.86%	-	-
Health Care Providers	45	26	0.24%	2002, 2008, 2011	-
Medical Equipment	132	105	0.98%	2002, 2008	2002, 2008
Medical Supplies	103	19	0.18%	2001, 2007, 2008	2001, 2007
Biotechnology	157	76	0.71%	1998, 2001, 2002, 2008	1998, 2002, 2008
Pharmaceuticals	95	187	1.74%	2008	-
Drug Retailers	120	46	0.43%	-	-
Food Retailers & Wholesalers	88	120	1.12%	2008	-
Apparel Retailers	66	133	1.24%	1990, 1998, 2008	2008
Broadline Retailers	87	59	0.55%	2008	-
Home Improvement Retailers	85	52	0.49%	1998, 2008	-
Specialized Consumer Services	156	10	0.09%	2000, 2001, 2008	2001
Specialty Retailers	90	371	3.46%	2008	-
Broadcasting & Entertainment	115	273	2.55%	1990, 2001, 2002, 2008	2001, 2002
Media Agencies	41	202	1.88%	1990, 1992, 2001, 2002, 2008	2001
Publishing	84	439	4.10%	2001, 2008	2008
Airlines	129	56	0.52%	1992, 2008	-
Gambling	100	121	1.13%	2001, 2006, 2008	2006
Hotels	80	227	2.12%	1990, 2008	-
Recreational Services	55	191	1.78%	1990, 1992, 2001, 2002, 2008	1992
Restaurants & Bars	72	256	2.39%	2008	-
Travel & Tourism	94	84	0.78%	2008	-
Fixed Line Telecommunications	142	145	1.35%	2000, 2001, 2002, 2008	2000, 2002
Mobile Telecommunications	143	86	0.80%	2001, 2002, 2008	2001, 2002
Computer Services	150	185	1.73%	1990, 2000, 2001, 2002, 2008	2000, 2002, 2008
Internet	151	31	0.29%	2000, 2001, 2002	-
Software	58	332	3.10%	1990, 2000, 2001, 2002, 2008	2000, 2002
Computer Hardware	34	20	0.19%	1990, 2001, 2002, 2008	2001
Electronic Office Equipment	105	13	0.12%	-	-
Semiconductors	130	10	0.09%	2000, 2001, 2002, 2008	-
Telecommunications Equipment	126	101	0.94%	2001, 2002, 2008	2001, 2002

The table presents the number of divestments by Datastream level 6 industry groups for a sample of divestment announcements by UK firms from 1988 to 2009. The sample consists of non-financial and non-utility firms in the FTSE All-Share Index of the London Stock Exchange.

Appendix B
Probit selection models of the probability of divesting assets

	(1)	(2)
FIRM	-0.1208 (-3.04)***	-0.1447 (-3.52)***
IND 1	-0.3574 (-5.06)***	
IND 2		-0.3900 (-4.02)***
ECON	-0.0807 (-3.26)***	-0.1359 (-6.19)***
LN (FSIZE)	-0.0978 (-4.79)***	-0.0973 (-4.75)***
CAPLO	0.1521 (4.36)***	0.1495 (4.27)***
NON CASH WC	-0.0664 (-2.86)***	-0.0646 (-2.80)***
PE	-0.0001 (-1.32)	-0.0001 (-1.32)
MTB	-0.0009 (-2.85)***	-0.0009 (-2.95)***
SALES GROWTH	-0.0034 (-1.17)	-0.0033 (-1.18)
ROA	0.1207 (3.12)***	0.1280 (3.18)***
Intercept	-0.7454 (-5.75)***	-0.7595 (-5.83)***
Number of observations	51,984	51,952
Pseudo R^2	0.017	0.014
Log pseudo likelihood	-14621.53	-14664.608
Wald χ^2	92.47***	129.65***

The table reports probit regressions of the likelihood of divesting assets for a sample of divestment announcements by UK firms from 1988 to 2009. The sample consists of non-financial and non-utility firms. The dependent variable is set equal to one if the firm announces a divestment in the subsequent financial year, and zero otherwise. NONCASH WC is current assets minus cash divided by current liabilities. PE is year-end share price divided by earnings per share. SALES GROWTH is the change in revenue over the subsequent financial year. ROA is the ratio of earnings before interest, taxes, depreciation and amortization (EBITDA) divided by book value of total assets. All remaining variables are defined in Table 1. Z-statistics are shown in parenthesis and are derived from standard errors clustered at the Datastream level 6 industry level. ***, **, and * denote significance at the 1%, 5%, and 10% level respectively.