Intra-Life Cycle Information Transfers

ABSTRACT

We investigate the presence of a shared life cycle component in earnings and test whether the earnings of one firm are relevant for valuing other firms in the same life cycle stage. We find that firm-pairs in the same life cycle stage have greater accounting comparability and greater co-movement in their returns, operating performance, and investments than firm-pairs consisting of firms in different life cycle stages. We further document economically significant transfers of information from announcing firms to non-announcing life cycle peers around an announcing firm's earnings announcement. The magnitudes are comparable to that of intra-industry information transfers and do not depend on whether the life cycle peers are also active in the same industry. In contrast, we find that intra-industry information transfers are smaller for industry peers in different life cycle stages. Information transfers are stronger for life cycle peers that have greater (transient) institutional cross-holdings, suggesting that institutional trading is an important mechanism by which life cycle information spills over. Overall, this study provides insight into the factors that shape a firm's earnings generation process and investors' use of such factors. Furthermore, this study complements prior literature on firm life cycle by providing additional evidence on the importance of life cycle in the valuation process.

"Skilled analysts must view companies from a perspective that identifies where they stand in their life cycle, realizing that companies refusing to 'act their age' can destroy value." (Aswath Damodaran)

I. INTRODUCTION

In this study, we investigate the extent to which there is a common life cycle component in earnings and evaluate whether (earnings) information of one firm is relevant for valuing other firms in the same life cycle stage. Although documenting the existence of a common component in earnings is not new, prior studies have almost uniquely focused on industry as an important driver of a firm's earnings-generating process. As a result, industry-models are now widely used in, for example, forecasting, valuation, and the identification of a firm's fundamentals.

A large literature documents the existence of information transfers at the industry level. For example, Foster (1981) finds that earnings releases of one firm provide information that is relevant for valuing other non-announcing firms in the same industry. Specifically, non-announcing peer firms' returns respond to (earnings) information disclosed in the quarterly earnings announcement of an announcing firm in the same industry. Other studies have since provided additional evidence on the existence and determinants of earnings announcement intra-industry information transfers (Han and Wild 1990, 2000; Asthana and Mishra 2001) and have provided evidence of similar information transfers around other types of (accounting) disclosures, including management earnings forecasts (Baginski 1987; Han, Wild, and Ramesh 1989; Hilary and Shen 2013) and analyst reports and recommendations (Piotroski and Roulstone 2004; Crawford, Roulstone, and So 2012). The importance of industry information has been documented in various other settings as well. For example, Hui et al. (2016) provide evidence of differential persistence in the firm-specific and industry-wide components of earnings, cash flows, and accruals, while there is also evidence on the importance of analyst industry expertise (e.g., Kadan, Madureira, Wang, and Zach

2012), or the importance of managers' industry expertise in an M&A setting (Custódio and Metzger 2013).

Building on studies in the organization literature that show that firm decisions and decision-making processes vary predictably across organizational life cycle stages, recent accounting studies document the importance of life cycle information for forecasting and valuation (Dickinson, 2011; Cantrell and Dickinson 2018; Vorst and Yohn 2018). In addition, studies show that the value-relevance of accounting measures and the behavior of accruals vary as a function of organizational life cycle (Anthony and Ramesh 1992; Dickinson, Kassa, and Schaberl 2018; Hribar and Yehuda, 2015). Other studies use firm life cycle to explain various other (financial) decisions such as dividend policies (DeAngelo et al. 2006; Grullon et al. 2002), corporate acquisitions (Owen and Yawson 2010), and diversification (Arikan and Stulz 2016), or have documented the importance of life cycle (peers) in a compensation setting (Drake and Martin 2015; 2018). Overall, these studies illustrate the importance of firm life cycle as an inherent determinant of firm behavior, firm performance, and the relevance of information attributes in an investor's information set. As such, these studies show evidence of predictable and systematic differences across firms in different life cycle stages, such that firms within a life cycle stage exhibit similar behavior while firms across life cycle stages exhibit different behavior.

Triggered by the importance of firm life cycle as a driver of a firm's behavior and its fundamentals, we investigate commonalities across life cycle peers and test for information spillovers between announcing firms and their non-announcing life cycle peers. Specifically, we expect that the information disclosed in and produced around announcing firms' earnings announcements is useful for valuing other non-announcing firms in the same life cycle stage.

We document significant commonalities within pairs of firms in the same life cycle stage across a wide range of dimensions relevant in the valuation process. Specifically, we find evidence of greater accounting comparability and co-movement in returns, operating performance, and investments within pairs of life cycle peers. These results hold irrespective of whether we restrict the sample to firm-pairs in the same industry, suggesting that the greater similarities for life cycle peers are distinct from and incremental to within-industry commonalities. In line with the greater commonalities within pairs of life cycle peers, we also document economically significant transfers of information between announcing firms and non-announcing life cycle peers. Specifically, we find a significantly positive relation between the three-day earnings announcement return of an announcing firm and the return over the same three days of non-announcing life cycle peers.

While these results suggest that there is relevant life cycle-wide information in the announcing firm's earnings announcement that spills over to non-announcing life cycle peers, they do not speak to which type of information is transferred. We therefore specifically investigate whether there is a transfer of *earnings* information. We group announcing firms into deciles based on the magnitude of the analyst forecast-based earnings surprise and calculate the average three-day abnormal announcement return for the decile, which we then compare to the non-announcing life cycle peers' returns over the same three days. We find that the average return of non-announcing life cycle peers increases over earnings surprise deciles 1 to 10. Moreover, the difference in the average return of non-announcing life cycle peers in decile 1 and decile 10 ranges between 0.081% and 0.156%, which is highly significant and comparable in terms of economic magnitude to intra-industry information transfers (Kovacs 2016).

Additional tests reveal that information transfers are concentrated among firms in the introduction, mature, shakeout, and decline stages, with the economically largest transfers occurring between firms in the latter two stages. For these firms, the return differential across life cycle peers in decile 1 and decile 10 increases to up to 0.293%. The results are generally weakest, both statistically and economically, for firms in the growth stage. These life-cycle specific results are generally consistent with Vorst and Yohn (2018) who show the greatest (no) improvement in the accuracy of out-of-sample growth and profitability forecasts for firms in the decline (growth) stage.

To investigate the extent to which life cycle information transfers are distinct from transfers within industries, we rerun the main analyses restricting the sample to peer firms that are in the same life cycle stage, but active in different industries. We find results that are very similar to the results reported for the full sample of peers. Specifically, we continue to find a positive and significant relation between announcing firms' earnings announcement returns and the non-announcing life cycle peers' same three-day returns. Similarly, when we focus on transfers of earnings information, we continue to find that the average returns of non-announcing peer firms generally increase from announcing firms' earnings surprise deciles 1 to 10, with an average non-announcing life cycle peer return differential between decile 1 and decile 10 of 0.070% to 0.146%. Overall, these results show that information transfers within life cycle stages are distinct from and incremental to information transfers within industries. Interestingly, whereas these results suggest that intra-life cycle information transfers do not depend on whether the life cycle peers are also industry peers, we find the opposite when replicating intra-industry information transfers. Specifically, we find that intra-industry information transfers are greater when the industry peers are also in the same life cycle stage.

We also investigate the mechanism by which life cycle information is transferred. Using management forecasts, Hilary and Shen (2013) show that analysts play an important role in the transfer of industry information between "issuing" firms and other "non-issuing" firms covered by the same analyst. Such a role is consistent with the view that analysts possess industry expertise (Kadan et al. 2012) and can facilitate information transfers across the firms they cover (Muslu, Rebello, and Xu 2014). As shared analyst coverage across the broad set of life cycle pairs is limited, it is unlikely that analysts are the main mechanism by which information is transferred across firms within the same life cycle stage. In contrast, we expect institutional cross-ownership to be an important mechanism by which life cycle information transfers across firms.

Previous research documents the importance of sophisticated institutional trading for the incorporation of (earnings) information into stock prices (Potter 1992; Jiambalvo, Rajgopal, and Venkatachalam 2002; Hotchkiss and Strickland 2003; Piotroski and Roulstone 2004) and shows that overlap in institutional ownership is an important mechanism by which disclosure practices diffuse across firms within an industry (Jung 2013). To the extent that these institutions trade on a life cycle-wide component in earnings, they may facilitate the transfer of information across life cycle peers. Indeed, anecdotal evidence suggests that various institutions specialize in investing in firms in specific life cycle stages, while the classical tradeoff between growth versus value investing is also reflective of an investing strategy based on a life cycle dimension (growth versus mature stage firms). Appendix A provides some specific examples of (institutions with) life cycle-based investment strategies.

Our results are consistent with the importance of institutional cross-ownership. We find that the magnitude of the information transfers increases in the number of institutional investors that own shares in both the announcing firm and the non-announcing life cycle peer. We do not find

these results for the number of institutions holding shares in only the announcing firm or the non-announcing life cycle peer. In addition, we find that cross-holdings by transient institutions have a greater impact on the magnitude of intra-life cycle information transfers than cross-holdings by long-term institutions, consistent with the concentration of information-based trading activities in the former group. This result is consistent with previous literature which finds that mainly transient short-term-focused institutions engage in informed trading (Yan and Zhang 2012) and accelerate the accurate pricing of earnings information (Ke and Petroni 2004; Ke and Ramalingegowda 2005; Collins, Gong, and Hribar 2003). Overall, these results are consistent with (transient) institutional trading being an important mechanism by which life cycle information transfers between life cycle peers.

Our primary measure of life cycle stage is based on the classification in Dickinson (2011). We find, however, that our results are robust to using various life cycle measures, including variations of the original Dickinson (2011) life cycle measure and a life cycle measure following Anthony and Ramesh (1992). The robustness of the results to using alternative measures and to controlling for (differences in) the operating, financing, and investing cash flows of the announcing firm and the peer firm suggests that the results are not driven by the underlying cash flows on which the Dickinson (2011) life cycle measure is based.

Our study contributes to several streams of literature. First, increased attention has recently been given to understanding the factors that shape a firm's earnings generation process, with particular importance being attached to understanding the role of economic fundamentals. While most of the prior research focuses on industry to address this issue, several studies question the assumption of intra-industry homogeneity and argue that by relying on industry only, one ignores many of the underlying economic factors that drive firm fundamentals (e.g., Owens, Wu, and

Zimmerman 2017). Our study adds to this literature by documenting the importance of firm life cycle as a relevant factor driving a firm's fundamentals.

Second, by investigating information transfers around earnings disclosures, we document the extent to which investors use within-life cycle commonalities in pricing (peer) firms. Our study adds evidence on the usefulness of accounting disclosures, with a particular focus on understanding the usefulness of a life cycle component of earnings. Our findings on the role of institutional cross-holdings provide further evidence on the types of investors that use life cycle information as well as the mechanism by which life cycle information spills over between firms in the same life cycle stage. As such, these results also contribute to the literature on information spillovers, by showing when and how life cycle information spills over.

Finally, the study contributes to the literature on firm life cycle by showing that there are commonalities across firms in a life cycle stage and by showing that such commonalities are recognized by (institutional) investors and strong enough to warrant detectable information transfers. Combined with the findings in the prior literature (Vorst and Yohn 2018; Drake and Martin 2018), our results are consistent with a potential role for firm life cycle in the identification of comparable peer firms for multiple-based valuation. This study, therefore, provides further evidence on the role of firm life cycle in the valuation process.

II. LIFE CYCLE AND INFORMATION TRANSFERS

Firm Life Cycle

While research on firm life cycle is relatively new to the accounting literature, firm life cycle has long been recognized as a major construct in the organization literature, which captures a firm's development over time as well as the internal and external factors that shape and reflect such development. For example, in one of the seminal studies on firm life cycle, Miller and Friesen

(1984) show that firms within a life cycle stage have complementarities in their strategies, structures, decision-making styles, and the external environment they face, while these aspects are different from firms in the other life cycle stages.

Other studies document an abundance of internal and external factors that vary systematically across the life cycle stages. For example, with respect to internal factors, studies show that organizational life cycle is associated with the criteria for organizational effectiveness (Quinn and Cameron 1983), the formality of management accounting systems (Moores and Yuen 2001), the use of activity-based costing systems (Kallunki and Silvola 2008), types of management controls used (Granlund and Taipaleenmäki 2005; Su, Baird, and Schoch 2015), the structure needed to support innovation (Koberg, Uhlenbruck, and Sarason 1996; Hanks, Watson, Jansen, and Chandler 1994), the benefits from corporate social responsibility activities (Wang and Bansal 2012), and the level of sophistication of decision-making processes (Miller and Friesen 1983). Similarly, with respect to external factors, studies document systematic differences in stakeholder importance (Jawahar and McLaughlin 2001), organizational networks (Hite and Hesterly 2001), hostility (Adizes 1979), and the competitiveness and structure of the market (Gort and Klepper 1982; Klepper 1996) across firms in different life cycle stages.

As firms develop and move through the different life cycle stages, this will bring about predictable changes in these internal and external factors. The importance of firm life cycle lies in the fact that it is rarely only one of these factors that changes when firms develop. Instead, many factors change simultaneously over the course of a firm's life. As such, firm life cycle is a multifaceted construct that captures the complex interplay between each of these factors, which is something that cannot be observed by looking at these factors in isolation.

More directly related to the implications of firm life cycle to investors, prior studies show that firm life cycle is an important factor to consider in gaining an understanding of the financial performance of a firm (Dickinson 2011). For example, Hribar and Yehuda (2015) show that firm life cycle affects the behavior of accruals and has implications for the accrual anomaly. Other studies show that firm life cycle affects the value-relevance of accounting measures, as well as their relative importance in an investor's information set (Anthony and Ramesh 1992; Dickinson, Kassa, and Schaberl 2018), or show that life cycle information can be used to analyze and predict a firm's financial performance (Dickinson 2011; Cantrell and Dickinson 2018; Vorst and Yohn 2018). Overall, these studies show the importance of firm life cycle as a determinant of firm decision making, a firm's earnings-generating process, and the information attributes relevant to investors.

Life Cycle and Information Transfers

Studies on intra-industry information transfers typically argue that information released by one firm is useful in valuing other firms in the same industry as the performance of all firms is, to some extent, affected by industry-wide factors. For example, if firm *i* reports earnings that are above expectations because of higher than expected industry growth, this is also relevant for valuing other firms in the industry, as they are likely affected by the same factors that drove up industry growth. Following the previous discussion and the similarities across firms in a life cycle stage, we argue that it is likely that there are information transfers across firms within a life cycle stage as well.

Previous research documents persistent differences in firm performance across the life cycle stages (Dickinson 2011) and shows that the degree of mean-reversion differs depending on the life cycle stage of the firm (Vorst and Yohn 2018). Hence, as firms within a life cycle stage have

similar performance dynamics, information releases of one firm can spill over to other firms in the same life cycle stage as in response to the announcing firm's earnings release investors also update their beliefs about the performance of life cycle peers. Similarly, Hribar and Yehuda (2015) show that the role of accounting accruals (i.e., whether they capture investments in future growth or mainly adjust for the timing of cash flows) varies across firms depending on their life cycle stage. As such, as the role of accruals is similar (different) within (across) life cycle stages, information releases by one firm can help investors to determine the extent to which the investment-related and other accruals of other firms in the same life cycle stage translate into future growth and cash flows. Finally, Anthony and Ramesh (1992) show that how the market responds to accounting disclosures also depends on the life cycle stage of the firm.[1] Collectively, these studies thus suggest a systematic life cycle component in accounting information and the way in which it is processed by investors. Consequently, we expect that information can spill over across life cycle peers.

A variety of other decisions and organizational challenges and risks also differ depending on the life cycle stage of the firm (Miller and Friesen 1984; Kazanjian 1988). The risks and challenges faced by a growth firm are likely substantially different from those of a decline stage firm that aims to prevent bankruptcy. Similarly, while overinvestment is a key concern for cash-generating mature firms with limited growth opportunities, underinvestment is a greater concern for earlier stage firms that can face difficulties in obtaining sufficient capital. As an illustration, consider Uber and Airbnb, two firms in the introduction stage. Despite the fact that both firms are active in completely different product markets (taxi/transportation versus tourism/hospitality), both firms face similar challenges. For example, consistent with Adizes (1979), both Uber and Airbnb were

[1] Specifically, they find that unexpected sales growth and capital expenditures are perceived as more beneficial for earlier stage firms that still aim to create a permanent competitive advantage and for which investments are, on average, creating more value.

confronted with increased levels of hostility and resistance once the business grew and began to eat away market share of (traditional) incumbent firms. Similarly, both firms make heavy investments in marketing expenses to attract customers to their platform, something that will translate into similar performance dynamics, despite being active in different industries. A similar argument can be made for the mature firms that are confronted with such new entrants and are likely to respond in a similar fashion. It should be noted that these similarities are not limited to tech-firms. For example, the issues faced by Tesla in attempting to scale the business are widespread across the economy and can be found in many other early-stage firms as well. Similarly, many of Tesla's governance issues are typical for early-stage firms that move from concentrated ownership to being widely held (see for example Uber as well).

Finally, broader economy-wide factors, likely affect firms within the same life cycle stage similarly. For example, a shift in (risk-free) interest rates has a different effect on introduction and growth companies who suddenly see discount rates rise and investment opportunities decline, compared to mature firms whose valuation is much less dependent on future realizations of (earnings) growth. Similarly, such changes in interest rates can have a systematic effect on financially troubled decline stage firms who see a change in the ability and cost of raising new financing. Hence, if such effects are systematic and affect firms within life cycle stages similarly, investors who observe the impact on the performance and growth opportunities of one firm can make useful inferences about how this will affect other firms in the same life cycle stage.

It should be noted that the literature on intra-industry information transfers typically distinguishes between positive and negative information transfers. Most studies find positive information transfers within an industry on average, suggesting that the good performance of one firm reveals a favorable industry environment for the industry peers as well. We also expect intra-

life cycle information transfers to be mostly positive in nature as the broad range of firms within a life cycle stage is less likely to be in direct competition with one another.

III. LIFE CYCLE COMMONALITIES

We begin our analyses by investigating whether firms in the same life cycle stage have greater accounting comparability and greater similarity in their underlying economics than other firms. We use the measure developed in De Franco, Kothari, and Verdi (2011) to capture accounting comparability. We measure synchronicity in return on assets, sales, and capital expenditures to capture the similarity in accounting fundamentals. We take the natural logarithm of the R-squared of a regression of the quarterly return on assets, sales, or capital expenditures of firm *i* on the quarterly return on assets, sales, or capital expenditures of firm *j* over the three-year period (i.e., 12 quarters) that ends at fiscal year-end, requiring a minimum of six quarterly observations.[2] Finally, we also measure stock return synchronicity as a broader measure of synchronicity that does not only rely on similarity in accounting constructs. Stock price synchronicity is measured as the natural logarithm of the R-squared of a regression of daily stock returns of firm *i* on the daily stock returns of firm *j*, over the 12 month period in fiscal year *t*.

We investigate whether comparability and synchronicity are higher if both firms in the pair are in the same life cycle stage (*SameLC*). We examine two different samples. The first sample includes all possible firm-pairs regardless of whether the firms are in the same industry. This sample allows us to investigate whether, after controlling for whether the firms in the firm-pair are in the same industry (Fama French 48 industries; *SameFF48*), firm-pairs in the same life cycle stage experience higher comparability and synchronicity. The second sample is restricted to firm-

[2] Following the (stock price) synchronicity literature we take the natural logarithm of the R-squared and calculate synchronicity as: log[RSQ/(1-RSQ)].

pairs in which both firms are in the same industry. This sample allows us to investigate whether, conditional on being in the same industry, firms in the same life cycle stage experience incrementally higher comparability and synchronicity.

We control for various other determinants of accounting comparability and (performance) synchronicity and include an indicator variable that captures whether the firms are listed on the same stock exchange (*SameEX*) or are headquartered in the same state (*SameST*). We further control for absolute differences in firm age (*Diff_AGE*), return on assets (*Diff_ROA*), earnings per share (*Diff_EPS*), book-to-market ratio's (*Diff_BTM*), leverage (*Diff_LEV*), (log) assets (*Diff_AT*), intangible asset intensity (*Diff_INT*), employee intensity (*Diff_EMP*), stock price (*Diff_PCR*), sales growth (*Diff_GRW*), (log) market value of equity (*Diff_MVE*) and cash flows (*Diff_CFO*, *Diff_CFF*, and *Diff_CFI*). We further control for firm size (log assets) and accounting performance (return of assets) of both firms in the pair and include industry and year fixed effects. We cluster standard errors at the firm level.

[TABLE 1]

The results reported in Table 1 provide strong evidence that firm-pairs in the same life cycle stage experience greater similarities in their accounting policies as well as their underlying economics than other firm-pairs. We find a positive and significant relation between *SameLC* and accounting comparability, return on asset synchronicity, sales synchronicity, capital expenditure synchronicity, and return synchronicity in all specifications, for both the full sample and the restricted sample of industry peers. While being in the same industry is positively associated with return on assets, sales, and stock return synchronicity, there is no such association for synchronicity in capital expenditures. Interestingly, being in the same life cycle stage is a more important determinant of accounting comparability than being in the same industry (*SameLC* coef. 0.440;

SameFF48 coef. 0.114). Results on the control variables are as expected, with most of the firm-pair differences loading negatively on comparability and synchronicity. Overall, these results document similarities across firms within the same life cycle stage and provide evidence that these similarities are present for many aspects relevant to investors including accounting measurements, operating performance (return on assets and sales), investments and/or cost structures (capex), and stock returns. As such, these similarities illustrate how accounting information of one firm can be relevant in valuing other firms in the same life cycle stage.

IV. INFORMATION TRANSFER RESEARCH DESIGN

The information transfer sample includes all quarterly earnings announcements in the Compustat-CRSP merged file over the period 1987 to 2017 for US firms listed on the NYSE, AMEX, and NASDAQ.[3] To assure that all firms in a fiscal quarter report over a similar period, following prior literature, we delete observations that do not have a December fiscal year-end. We further drop financial and utility firms (sic 6000-6999 and 4600-4699) and require firm-quarters to have a non-missing Fama French 48 Industry code. To obtain the earnings surprise, we further require a minimum of one quarterly analyst earnings forecast issued in the 90-day period prior to the earnings announcement in the unadjusted I/B/E/S Summary file.

To measure firm life cycle, we follow Dickinson (2011) and classify firms into five different stages, *Introduction*, *Growth*, *Mature*, *Shakeout*, and *Decline*, based on the signs of a firm's operating, investing, and financing cash flows. As such, the measure directly reflects the theoretical links between cash flows and firm life cycle and, consistent with what has been found in the organization literature, allows firms to move back and forth across the stages and allows for

[3] The sample starts in 1987 as this is the first year for which cash flow data are available in Compustat, albeit on a limited basis. Broader cash flow coverage starts in 1988.

extreme transitions (i.e., from introduction to decline). Although the subsequent tests use quarterly data, to eliminate the impact of seasonality on the observed cash flow patterns, we calculate firm life cycle using annual cash flow data and assign the resulting life cycle stage to all fiscal quarters of the year. Firm-years with missing life cycle information are deleted.[4]

Finally, we require firms to have a non-missing earnings announcement date and a non-missing earnings announcement return. To obtain the earnings announcement date, we follow Kovacs (2016) and use a combination of I/B/E/S and Compustat information. Specifically, if available, we use the I/B/E/S earnings announcement date and time and set the event date equal to the I/B/E/S announcement date (the trading day following the I/B/E/S announcement date) if the earnings announcement time is listed as being before (on or after) 4pm. If the earnings announcement date in I/B/E/S is missing, we use the Compustat earnings announcement date (*RDQ*) and trading volume data from CRSP to determine the event date. Specifically, we set the event date equal to *RDQ*, unless the trading volume on the trading day following *RDQ* is at least twice the trading volume on *RDQ*, in which case we pick the trading day following *RDQ* as the event date.

We use the three-day cumulative abnormal return centered around the earnings announcement date (-1,0,+1) to capture the market reaction to a firm's earnings release. We use both market-adjusted and size-adjusted returns. Whereas most studies on information transfers use

[4] We use the following classification table to assign firm-year observations to the distinct life cycle stages (retrieved from: Dickinson 2011, p. 1974):

	Life Cycle Stages							
	Introduction	Growth	Mature	Shakeout			Decline	
Cash Flow Type	1.	2.	3.	4.	5.	6.	7.	8.
Operating Activities	-	+	+	-	+	+	-	-
Investing Activities	-	-	-	-	+	+	+	+
Financing Activities	+	+	-	-	+	-	+	-

market-adjusted returns, investigating whether the results are sensitive to the use of size-adjusted returns is important as size is an important driver of expected returns (Fama and French 1993) and can vary significantly across the life cycle stages. Abnormal returns are calculated as follows:

$$ARET\_MKADJ_{itd} = RET_{itd} - MKRET_{itd} \quad (1)$$

$$ARET\_SZADJ_{itd} = RET_{itd} - SZRET_{itd} \quad (2)$$

Where *RET* is the daily raw return, *MKRET* is the daily return on the value-weighted CRSP market index, and *SZRET* is the daily return on a portfolio of firms in the same NYSE/AMEX/NASDAQ size decile. Cumulative abnormal returns are then calculated as follows:

$$CAR\_MKADJ = \sum_{i,q}^{d=-1,0,+1} ARET\_MKADJ \quad (3)$$

$$CAR\_SZADJ = \sum_{i,q}^{d=-1,0,+1} ARET\_SZADJ \quad (4)$$

Observations with missing announcement returns are deleted. Table 2 reports the sample selection process and the number of observations dropped after each of the steps described above.

[TABLE 2]

To investigate the presence of intra-life cycle information transfers we need to (1) select a group of announcing firms and (2) select a set of non-announcing life cycle peers. Previous literature on intra-industry information transfers finds that primarily large firms disclose information that is relevant to the valuation of peer firms (Asthana and Mishra 2001). Consequently, research (e.g., Kovacs 2016) focuses on large announcing firms for the identification of intra-industry information transfers. Following the prior research, we select the 25 largest firms by sales in a fiscal quarter and life cycle stage as a set of firms that report information that is relevant to the

valuation of life cycle peers.[5] To obtain the set of non-announcing life cycle peers, we select all firms in the same life cycle stage and fiscal quarter that do not have a concurrent earnings announcement. Specifically, we drop peer firms if they announce earnings on the same day or the two trading days prior to or following the announcing firms' earnings release date (-2,0,+2). We then calculate the peer firm three-day cumulative abnormal return around the earnings announcement of the announcing firm to which it is matched following the methodology described above.

V. RESULTS

Descriptive Statistics

Table 3 reports descriptive statistics on the full sample, the subsample of large announcing firms used in the analyses, as well as their life cycle peers. For the full sample, most firms are in the growth or the mature stage (33.7% and 39.2%, respectively), while the lowest percentage of firms is in the decline stage (6.5%). Relatively few firms are listed on the AMEX and the median (mean) level of quarterly sales is $112 million ($690 million). Driven by the requirement to have at least one analyst forecast, there is a relatively high level of analyst following, with on average more than six analysts issuing a quarterly earnings forecast. The average announcement CAR is close to zero, possibly indicating that in the cross-section of announcements, good and bad news cancel out.

[TABLE 3]

The descriptive statistics of the large announcing firms (top 25 by sales) reveal a few noteworthy differences. Given that we select the 25 largest firms (as measured by sales) in a life cycle stage

[5] Results are robust to using different size cutoffs and selecting, for example, the 10, 20, 30, 40, or 50 largest firms in a fiscal quarter and life cycle stage.

every quarter, the number of announcing firms in each stage is roughly equal to around 20 percent of the sample. Moreover, these large firms report average quarterly sales of close to $4.2 billion, compared to $690 million for all firms. They have higher analyst coverage (9.994 versus 6.233), are more profitable (ROA of 0.003 versus -0.005), and are less likely to be loss-making (27.2% versus 30.7%). Finally, the focus on large firms biases the sample towards firms listed on the NYSE (78% versus 45%).

Not surprisingly, the descriptive statistics of the sample of life cycle peers are very similar to those of the full sample. Most peer firms are in the growth and the mature stage, while the lowest percentage of peer firms is in the decline stage. The average peer return around an announcing firm's earnings announcement is indistinguishable from zero, but the standard deviation of 0.060 reveals that there is considerable variation in the returns.[6]

Life Cycle Information Transfers – Full Sample

Table 4, Panel A presents the results of a regression of announcing firms' earnings announcement CARs on the three-day returns of peer firms in the same life cycle stage, with standard errors clustered at the peer firm level. If the announcing firm releases information that is relevant to the valuation of peer firms in the same life cycle stage, the returns of the two firms should be correlated. The results show a positive and significant relation between announcing firm CARs and peer firm returns over the same window using both market-adjusted (coef. 0.01208, t-stat 18.15) and size-adjusted (coef. 0.00822, t-stat 11.79) returns. These findings provide the first evidence of positive intra-life cycle information transfers. However, while these results provide evidence of commonalities between announcing firms and life cycle peers, they do not speak to

[6] In the main tests, we do not winsorize or truncate returns, however, results are robust to either truncating or winsorizing returns at the 1st and 99th percentile.

which type of information is transferred across firms. Hence, we next investigate whether there are transfers associated with the release of *earnings* information.

To investigate earnings-related intra-life cycle information transfers, we first calculate, for each announcing firm, an analyst forecast-based earnings surprise. Specifically, the earnings surprise is calculated as the firm's actual earnings as reported by I/B/E/S, less the latest analyst consensus (mean) forecast issued prior to the end of the fiscal quarter, scaled by the stock price at the end of the fiscal quarter. We then create a quarterly decile rank (SD) of the scaled analyst forecast error and investigate whether the returns of life cycle peer firms vary systematically with the announcing firms' earnings surprise decile. The results are reported in Table 4, Panel B.

[TABLE 4]

Not surprisingly, the announcing firms' earnings announcement CARs are increasing monotonically from decile 1 to decile 10. However, what is striking is the strong correlation between life cycle peer firms' returns and the announcing firms' CARs. Non-announcing life cycle peers' returns are generally increasing, although not monotonically, from earning surprise deciles 1 to 10. When we regress the earnings surprise decile rank on the average return of the life cycle peers in the decile we find a significantly positive relation between the announcing firms' earnings surprise decile rank and the average return of life cycle-matched peer firms. Finally, we also test whether the returns of the life cycle peers in decile 10 are significantly higher than the returns of the life cycle peers in decile 1. The results again confirm the existence of intra-life cycle information transfers, with a market-adjusted (size-adjusted) return differential between decile 1 and decile 10 of 0.156% (0.081%). These results are economically significant and comparable in terms of magnitude to what the previous literature documents for intra-industry information

transfers. Overall, the results reported in Table 4, Panels A and B, provide strong evidence of intra-life cycle information transfers.

Thus far, the results suggest that there are economically strong information transfers across announcing firms and their non-announcing life cycle peers. We next investigate whether these results differ conditional on the life cycle stage of the firm. For each of the life cycle stages, we create subsamples of announcing and non-announcing peers and test whether the returns of non-announcing life cycle peers in decile 10 are significantly higher than those of non-announcing life cycle peers in decile 1. The results are reported in Table 4, Panel C. We find the strongest results for firms in the mature, shakeout, and decline stages, with decile hedge returns that are positive and significant. We find that the economically largest transfers are for firms in the shakeout and decline stages. For example, for firms in the shakeout (decline) stage, the difference in returns between decile 1 and decile 10 ranges between 0.173% and 0.270% (0.201% and 0.293%), which is up to three times the magnitude reported in the full sample. We find weaker results for firms in the introduction stage for which the difference between the returns in decile 10 and decile 1 is significant only when using market-adjusted returns. We do not find evidence of information transfers for firms in the growth stage.

In summary, we find that there are economically strong information transfers across firms within a life cycle stage. While we find evidence of information transfers in the majority of the life cycle stages, their magnitude varies considerably across the stages. The result that transfers are generally greatest for firms in the decline stage and absent for firms in the growth stage is also in line with prior literature. For example, Vorst and Yohn (2018) show that while life cycle models improve the accuracy of out-of-sample growth and profitability forecasts for firms in most of the life cycle stages, the biggest (smallest) improvements are for firms in the decline (growth) stage.

Although speculative, one explanation for the weaker results for firms in the growth stage could be that earnings information (and by extension the earnings surprise) is less relevant for the firms in this stage.

[TABLE 5]

Table 5 presents the results of regression analyses that include control variables. Specifically, we restrict the sample to (peer) firms in earnings surprise deciles 1 and 10 and create an indicator variable, *Low_Decile*, which is equal to one for life cycle peers matched to an announcing firm in decile 1, and zero for peers matched to announcing firms in decile 10.[7] We control for (peer) firm characteristics that can drive both their life cycle assignment and the abnormal announcement return. We control for firm size, measured as the natural logarithm of a firm's end-of-quarter market capitalization (PRCCQ*CSHOQ; *MVE, Peer_MVE*), as firm size differs conditional on a firm's life cycle stage and prior studies (Fama and French 1993) find that size is an important factor explaining the cross-section of returns. Similarly, the use of leverage (DLTTQ + DLCQ / ATQ; *Lev, Peer_Lev*) likely depends on a firm's life cycle stage and can also determine a firm's risk and (expected) returns. We also control for the firm's book-to-market ratio (SEQQ / [PRCCQ*CSHOQ]; *BTM, Peer_BTM*) as growth opportunities vary by life cycle stage and many studies find differences in the returns of value and glamour stocks (Fama and French 1993; Piotroski and So 2012). Finally, we control for a firm's quarterly performance (IBQ/ lag ATQ; *ROA, Peer_ROA*) and for whether the firm is loss-making (IBQ<0; *Loss, Peer_Loss*) as the informativeness of accounting disclosures is different for loss firms (Hayn 1995).

[7] The results are not sensitive to restricting the sample to (peer) firms in the top and bottom decile of scaled analyst earnings surprises. We find similar results when we do not restrict the sample and estimate a regression of peer announcement returns on the decile rank of scaled analyst earnings surprises.

One concern with the tests reported thus far is that the information transfers we document may not be related to firm life cycle, but rather to the (magnitudes of the) underlying cash flows itself. To mitigate this concern, we control for the (peer) firms' quarterly cash flow levels (OANCF / lag ATQ, *Peer_CFO*; FINCF / lag ATQ, *Peer_CFF*; IVNCF / lag ATQ, *Peer_CFI*), as well as the absolute differences in announcing and peer firms' annual cash flows (*Diff_CFO, Diff_CFF, Diff_CFI*).[8] We further include year, fiscal quarter, and industry (Fama French 48) fixed effects. Standard errors are clustered at peer firm level and we present results using both market-adjusted and size-adjusted returns. Table 5, Column (1) and (2) present results controlling for the fixed effects only, while in subsequent columns different sets of controls are added to the regression specification. The final columns also control for life cycle stage fixed effects. The regression specification is as follows:

$$\begin{aligned} Peer\_CAR = {} & \alpha + \beta_1 Low\_Decile + \beta_2 MVE + \beta_3 Peer\_MVE + \beta_4 Lev + \beta_5 Peer\_Lev + \beta_6 BTM + \\ & \beta_7 Peer\_BTM + \beta_8 ROA + \beta_9 Peer\_ROA + \beta_{10} Loss + \beta_{11} Peer\_Loss + \beta_{12} CFO + \beta_3 CFF \\ & + \beta_{14} CFI + \beta_{15} Peer\_CFO + \beta_{16} Peer\_CFF + \beta_{17} Peer\_CFI + \beta_{18} Diff\_CFO + \\ & \beta_{19} Diff\_CFF + \beta_{20} Diff\_CFI + \text{Year FE} + \text{Industry FE} + \text{Fiscal Quarter FE} + \text{Life Cycle} \\ & \text{FE} + \varepsilon \end{aligned} \quad (5)$$

As can be seen from the results, adding controls has little effect on the economic and statistical significance of *Low_Decile*. The coefficient on *Low_Decile* is negative and highly significant in all specifications. The coefficient ranges between -0.001 and -0.002, indicating that peer firms matched to announcing firms in the low earnings surprise decile have concurrent returns that are lower by -0.10% to -0.20%. Given that these firms themselves do not have any major

[8] We control for the absolute difference in annual cash flows because we use those to determine a firm's life cycle. We include both announcing and peer firms' quarterly cash flows in the regression.

announcement, these results are further indicative of economically strong intra-life cycle information transfers.

Life Cycle Information Transfers – Non-Aligned Industries

The results reported thus far are based on the full sample of firms that includes life cycle peers that are active in the same industry as the announcing firm. To investigate whether the intra-life cycle information transfers are distinct from and incremental to intra-industry information transfers, we rerun the main tests on a sample of firms that excludes life cycle peers that are active in the same industry as the announcing firm. Specifically, we delete life cycle peers if they have the same Fama French 48 code as the announcing firm. The results are reported in Table 6 and Table 7, which reproduce the findings reported in Table 4 and Table 5, but on the restricted sample. The results are very similar to those reported on the full sample, both statistically and economically, suggesting that the intra-life cycle information transfers documented in the full sample are not driven by, and are distinct from, intra-industry information transfers. Untabulated tests reveal similar findings using alternative industry definitions. Specifically, the results are robust to dropping life cycle peers in the same two-digit historical sic code, six-digit GICS code, and deleting firms that are listed as an announcing firm's industry peer based on the similarity of the product market descriptions in their 10-K's (Hoberg and Phillips 2010, 2016).

[TABLE 6]

[TABLE 7]

Life Cycle and Intra-Industry Information Transfers

Previous studies on information transfers have almost exclusively focused on the transfer of industry information. Although the previous results suggest that the intra-life cycle information transfers we document are distinct from intra-industry information transfers, we explore the role

of firm life cycle in the transfer of industry information. Specifically, we test whether intra-industry information transfers are greater when firms within an industry also have the same life cycle stage. The general idea underlying the transfer of information within an industry is that better than expected performance of one firm reveals a favorable industry environment that also benefits the other firms in the industry. However, this may also depend on the life cycle stage of the firm. For example, whereas the good performance of a growth firm can reflect beneficial growth dynamics for other (disruptive) growth firms within the industry, it may come at the expense of the performance of stable mature stage firms. In this example, one would expect positive information transfers for industry peers that are both in the growth stage, while there would be no or a negative transfer between a growth stage announcing firm and its mature stage peer firm.

[TABLE 8]

We begin by replicating prior studies on intra-industry information transfers in Table 8, Panel A. Consistent with the prior literature, we find evidence of information transfers at the industry level. In fact, the decile hedge return of non-announcing industry peers of 0.2158% to 0.2413% is considerably larger than the 0.1129% reported in Kovacs (2016). In Table 8, Panel B, we partition the sample of industry peers into two groups depending on whether the two firms are in the same life cycle stage and compare the decile hedge return across the two subsamples. We find that intra-industry information transfers are larger when industry peers also share the same life cycle stage. Whereas the market-adjusted (size-adjusted) hedge return is equal to 0.316% (0.273%) for industry peers in the same life cycle stage, it is only 0.202% (0.186%) for industry peers in different life cycle stages, with the difference being significant at the five (ten) percent significance level, two-tailed. Overall, these results document a role for firm life cycle in intra-industry information transfers.

Institutional Cross-Holdings

Next, we investigate the mechanism by which life cycle information is transferred from large announcing firms to non-announcing life cycle peers. Previous literature on intra-industry information transfers has explored the role of analyst (cross-) coverage in the transfers of industry-wide information. For example, Hilary and Shen (2013) find that when a firm issues a management forecast, analysts who have experience in covering the issuing firm also improve the accuracy of their earnings forecasts for other non-issuing firms in the same industry. This finding suggests that analysts use relevant industry information in the issuing firm's management forecast to update their forecasts for the other firms they cover in the same industry.

However, analyst cross-coverage is very limited in the broad set of announcing firms and their life cycle peers. Hence, it is unlikely that analyst cross-coverage and the resulting information spillovers are the main mechanism by which life cycle information is transferred. In contrast, we focus on the role of institutional cross-holdings as a factor that may affect the magnitude of intra-life cycle information transfers. There is a large literature that explores the role of institutions in the production of private information and the incorporation of public information into stock prices. For example, Jiambalvo et al. (2002) find that stock prices incorporate more information on future-period earnings for firms in which institutions own a greater percentage of the shares. Similarly, Hotchkiss and Strickland (2003) find that the short-term market reaction to negative earnings surprises is more complete for stocks with higher institutional ownership, while Bartov, Radhakrishnan, and Krinksky (2000) find evidence of a smaller post-earnings announcement drift for stocks owned by institutions. Overall, these studies provide evidence of greater price efficiency for firms with higher levels of institutional ownership.

There is also anecdotal evidence that suggests that (institutional) investors incorporate life cycle information into their investment decisions or develop trading strategies and portfolios centered on certain life cycle stages. For example, venture capital investors specialize in investing in younger and faster growing introduction and growth stage firms. Similarly, institutions that employ a smart beta or factor approach often create exposure to a growth or value factor by investing in a portfolio of introduction and growth or mature firms, respectively. Appendix A provides some examples of institutions that use investment strategies centered on firms in a particular life cycle stage. These examples also illustrate that life cycle based investment strategies are much broader than creating exposure to growth or mature firms only, but instead encompass the entire universe of life cycle stages.

Given that we are interested in the transfer of information from announcing firms to non-announcing life cycle peers, we focus on the role of institutional *cross-holdings,* i.e., the extent to which the announcing firm and the life cycle peer have common institutional ownership. The importance of overlap in institutional owners has been documented in other settings. For example, Jung (2013) finds that an increase in disclosures provided by one firm triggers other firms in the industry to increase their disclosures. This effect is positively associated with the overlap in institutional investors as the overlapping institutions demand similar disclosures of the previously non-disclosing industry peers. Specifically related to our setting, we argue that institutions that own shares in both firms should be better able to understand the implications of the life cycle information in the announcing firm's earnings announcement for the valuation of the peer firm. Moreover, as they own shares in both firms, it is more likely that they also actively trade on the life cycle information and thereby cause the information to be impounded into the peer firm's stock price.

To investigate whether institutional cross-holdings affect the magnitude of intra-life cycle information transfers, we estimate the following model:

$$Peer\_CAR = \alpha + \beta_1 Low\_Decile + \beta_2 Inst\_Overlap + \beta_3 Low*Inst\_Overlap + \beta_4 Inst\_Announce + \beta_5 Low*Inst\_Announce + \beta_6 Inst\_Peer + \beta_7 Low*Inst\_Peer + \beta_8 MVE + \beta_9 Low*MVE + \beta_{10} Peer\_MVE + \beta_{11} Low*Peer\_MVE + \beta_{12} Follow + \beta_{13} Low*Follow + \beta_{14} Peer\_Follow + \beta_{15} Low*Peer\_Follow + \beta_{16} BTM + \beta_{17} Low*BTM + \beta_{18} Peer\_BTM + \beta_{19} Low*Peer\_BTM + \beta_{20} Lev + \beta_{21} Low*Lev + \beta_{22} Peer\_Lev + \beta_{23} Low*Peer\_Lev + \beta_{24} ROA + \beta_{25} Low*ROA + \beta_{26} Peer\_ROA + \beta_{27} Low*Peer\_ROA + \beta_{28} Loss + \beta_{29} Low*Loss + \beta_{30} Peer\_Loss + \beta_{31} Low*Peer\_Loss + \text{Year FE} + \text{Industry FE} + \text{Fiscal Quarter FE} + \varepsilon \quad (6)$$

Where *Inst_Overlap* is equal to the number of institutions that own shares in both the announcing firm and the peer firm, *Inst_Announce* is the number of institutions that own shares in the announcing firm but not the peer firm, and *Inst_Peer* is the number of institutions that own shares in the peer firm, but not the announcement firm. As we expect that institutional cross-holdings are positively associated with intra-life cycle information transfers, we expect the coefficient on the interaction of *Low_Decile* and *Inst_Overlap* (β_3) to be significantly negative. Given that we are interested in the interaction effect of *Low_Decile* and *Inst_Overlap*, we also include interactions of all of the control variables with *Low_Decile* to better isolate the effect of institutional overlap on the magnitude of the intra-life cycle information transfers. We do not include the number of cross-covering analysts as a control variable because the vast majority of the firm-peer combinations (>99%) have no analyst cross-coverage. However, we do include the number of analysts that cover the announcing firm (*Follow*) or the peer firm (*Peer_Follow*), as well as their interactions with *Low_Decile*, as control variables. All other variables are as defined before. Standard errors are clustered at peer firm level.

[TABLE 9]

The results are reported in Table 9. The results reported in column (1) and (2) are consistent with an important role for institutional investors in the transfer of life cycle information from announcing firms to non-announcing life cycle peers. Specifically, we find a negative and significant interaction effect of *Low_Decile* and *Inst_Overlap*, indicating that the magnitude of information transfers is increasing in the number of institutions that own shares in both the announcing firm and the life cycle peer firm. These results are also economically significant as a one-standard-deviation increase in *Inst_Overlap* is associated with a -0.06 % lower return for peer firms matched to announcing firms in the low earnings surprise decile. In contrast, we do not find that analyst coverage (at either the announcing firm or the peer firm) is associated with stronger intra-life cycle information transfers.

Prior research finds that mostly transient short-term focused institutions engage in informed trading (Bushee 1998; Yan and Zhang 2012; Akins, Ng, and Verdi 2012). Hence, the impact of institutional investors on stock price informativeness mostly comes from these actively trading short-term focused institutions. For example, Ke and Ramalingegowda (2005) show that the reduction in post-earnings announcement drift for firms with higher levels of institutional ownership is driven by the subset of transient institutional owners. Similarly, Collins, Gong, and Hribar (2003) find that institutional ownership is associated with less accrual mispricing, but only for firms with a sufficiently high level of actively trading (i.e., transient) institutions.

The results in columns (3) to (8) are generally consistent with the importance of transient institutional owners for the transfer of life cycle information. Column (3) to (6) estimate separate regressions with the number of transient and long-term institutional owners and show that the coefficient on *Low*Inst_Overlap* is significantly greater (i.e., more negative) for transient owners

than for long-term institutional owners, providing the first evidence on the greater relative importance of transient institutions for information transfers. Columns (7) and (8) present results conditional on the number of transient institutions with cross-holdings as a percentage of all institutions with cross-holdings. Specifically, we include interactions between the number of institutions with cross-holdings and the percentage of those that are transient (*Pct_Trs_Overlap*). Similarly, we include interactions of the number of institutions with holdings in the announcing or peer firm only and the percentage of those that are transient (*Pct_Trs_Announce*; *Pct_Trs_Peer*). The three-way interaction of *Low_Decile*, *Inst_Overlap*, and *Pct_Trs_Overlap* captures the incremental impact of having a greater percentage of transient institutions. Although significant only when using size-adjusted returns, the results indicate that information transfers are greater when transient institutions make up a larger percentage of all institutions with cross-holdings.[9] Overall, the results are consistent with Collins, Gong, and Hribar (2003) and provide further evidence that actively trading transient institutions that invest in both the announcing firm and the peer firm are an important mechanism by which information spills over from announcing firms to their life cycle peers.

Robustness Tests

Alternative Life Cycle Measure

Although the cash flow-based life cycle measure is closely aligned with life cycle theory, a potential concern is that the information transfers we document are not related to firm life cycle, but rather to the (signs) of the underlying cash flows. Although in the regression specifications,

[9] In an additional (untabulated) test we re-estimate equation (6) and include simultaneously the number of transient and dedicated (overlapping) institutional owners and their interactions with *Low_Decile*. We find that the coefficient on *Low_Decile*Inst_Overlap* is significantly negative for transient institutions and positive and insignificant for dedicated institutions, providing further evidence that it is the transient institutions that are associated with a greater transfer of life cycle information.

we control for (differences in) the various cash flows and still find strong evidence of intra-life cycle information transfers, we nevertheless test the robustness of our results with a measure that does not rely on cash flow data. We use a life cycle measure based on Anthony and Ramesh (1992) as adjusted by Hribar and Yehuda (2015). Specifically, we classify firms into three life cycle stages (growth, maturity, and decline) based on sales growth over the last two years, capital expenditures (CapEx plus R&D expense, scaled by total assets), net capital transactions (change in total stockholders' equity less net income, scaled by total assets), and firm age. We standardize and sum each of these variables (sales growth + capex + net capital transactions – firm age) and create a tercile rank to assign firms to a life cycle stage.

[TABLE 10]

The results are reported in Table 10. We continue to find evidence of a, albeit slightly weaker, positive and significant difference in life cycle peer returns between earnings surprise deciles 1 and 10. Overall, the findings using the Anthony and Ramesh (1992) life cycle measure confirm the previously reported results and provide evidence that is it is unlikely that the results are driven by the underlying cash flows itself.

VI. CONCLUSION

The role of industry fundamentals has been explored extensively by prior literature. For example, studies have identified industry as an important factor driving analyst expertise (Kadan et al. 2012), the behavior of accruals (Dechow, Sloan, and Sweeney 1995), and earnings persistence (Hui et al. 2016). As part of this literature, Foster (1981) documents the existence of information transfers at the industry level and shows that earnings releases of one firm provide information that is relevant for valuing other non-announcing firms in the same industry. However, despite its importance, it is unlikely that industry is the only factor that determines accounting fundamentals. In line with

this point, Fairfield, Ramnath, and Yohn (2009) show that whereas industry models help to predict future growth, they do little to improve the accuracy of profitability forecasts and, in fact, can lead to forecasts that are less accurate.

Building on studies in the organization literature that since long have shown that firm decisions and firm decision-making processes vary predictably across organizational life cycle stages (e.g., Miller and Friesen 1983), in this study we investigate the extent to which there are intra-life cycle information transfers. We first document considerable commonalities across firms in the same life cycle stage, by showing that they have greater accounting comparability and higher synchronicity in returns, operating performance, and investments. We then find that the earnings announcement returns of large announcing firms are positively associated with same-window returns of non-announcing peers in the same life cycle stage. These information transfers across firms within a life cycle stage are also economically significant. For example, after ranking announcing firms based on the magnitude of their earnings surprise, we find a return differential of 0.081% to 0.156% between peer firms matched to announcing firms in the lowest and highest earnings surprise decile. These magnitudes are comparable to what previous literature has found for intra-industry information transfers. Further tests reveal that these results are strongest for firms in the introduction, mature, shakeout, and decline stages. In these latter two stages, the differences in returns between peer firms in the lowest and highest earnings surprise decile increase to up to 0.293%. We also document a role for firm life cycle in the transfer of industry information by showing that intra-industry information transfers are greater when the industry peers are in the same life cycle stage. We further find that (transient) institutions who own shares in both the announcing firm and the life cycle peer firm are an important mechanism by which life cycle information spills over between the two firms.

Overall, the findings in this study have important implications for firm valuation and contribute to the literature on the role of economic fundamentals in the determination of accounting measures. Moreover, this study complements prior studies on firm life cycle by providing additional evidence on the importance of firm life cycle in firm valuation.

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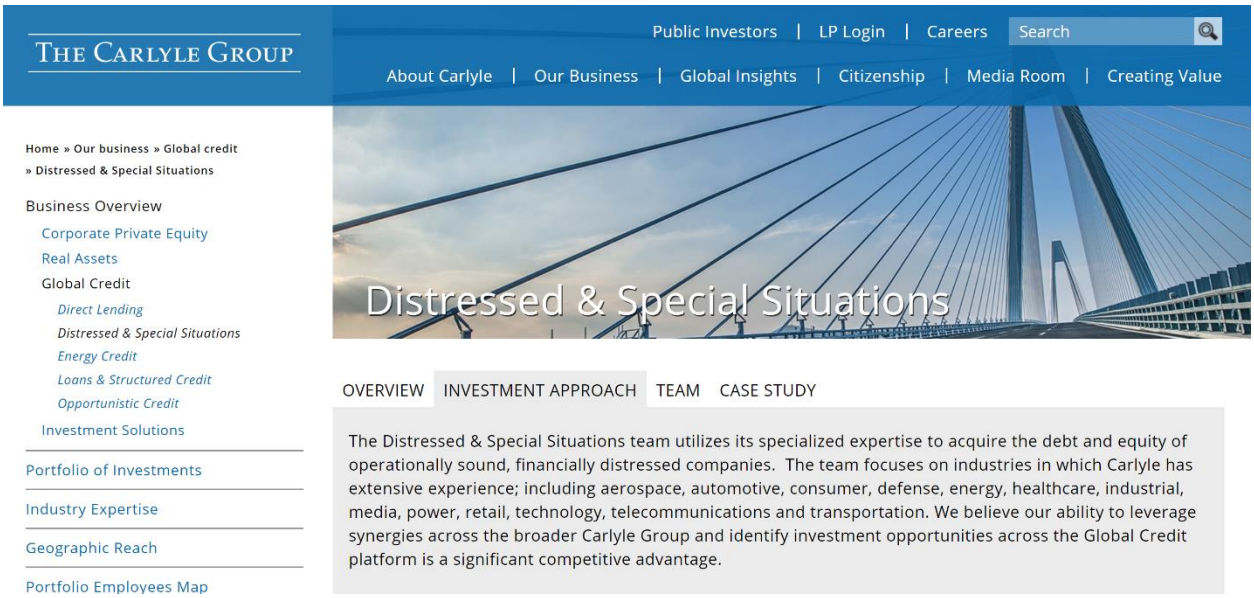
APPENDIX A

Carlyle Group's Distressed and Special Situations Team:



Piper Jaffray's Investment Strategy targeted towards later stage growth firms:

ADVISORY RESEARCH INVESTMENT MANAGEMENT

ENERGY FUNDS

MERCHANT BANKING

- Industry Focus
- Investment Profile
- How We Operate
- Portfolio Companies
- Investor Login
- Investment Team
- Contact Us

PIPER JAFFRAY INVESTMENT MANAGEMENT

INVESTMENT PROFILE

Piper Jaffray Merchant Banking

PJMB funds provide exposure to high growth companies. The funds seek to provide an attractive return with a lower risk of capital loss and a faster return of capital than other private equity strategies.

Investment Criteria	
Industry Focus:	• Companies within Piper Jaffray's established areas of industry expertise which include: healthcare, technology, business services, financial technology and consumer
Late-Stage Focus:	• Commercial businesses with significant revenue streams and a referenceable client base • Typically at least $10 million of LTM revenue
High Growth Companies:	• High growth (20%+) companies with high gross margins and operating leverage
Leading Market Player with Barriers to Entry:	• Companies that have built top tier positions within emerging sub-market verticals, and possess technology, IP or other attributes which create barriers to entry
Strong Management:	• Talented management teams capable of executing business plans, with aligned equity incentives
Transaction Type:	• Focus on late-stage growth financings and growth company control transactions • $5 - $15 million investment size
Security Structure:	• Security structures which protect downside risk while maximizing return opportunity

TABLE 1

Accounting Comparability, Fundamental and Return Synchronicity, and Life Cycle Pairs

	All Firm-Pairs					**Firm-Pairs within the same Fama French 48 Industry**				
Variables	*Acctcomp*	*Synch_ROA*	*Synch_Sale*	*Synch_Capx*	*Synch_Ret*	*Acctcomp*	*Synch_ROA*	*Synch_Sale*	*Synch_Capx*	*Synch_Ret*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Intercept	-3.837***	-2.842***	-3.331***	-3.68***	-9.213***	-3.297***	-2.867***	-3.774***	-3.804***	-9.447***
	(-12.29)	(-57.53)	(-40.63)	(-83.05)	(-71.38)	(-9.99)	(-37.78)	(-40.54)	(-45.45)	(-72.40)
SameFF48	0.114***	0.132***	0.372***	-0.011***	0.176***					
	(9.62)	(28.49)	(36.90)	(-3.95)	(15.53)					
SameLC	**0.440*** **	**0.026*** **	**0.010*** **	**0.013*** **	**0.032*** **	**0.508*** **	**0.059*** **	**0.069*** **	**0.015*** **	**0.028*** **
	(42.86)	**(16.39)**	**(4.40)**	**(8.37)**	**(9.56)**	**(33.33)**	**(11.56)**	**(8.27)**	**(4.42)**	**(3.40)**
SameEX	0.012	0.019***	0.029***	0.032***	0.037***	-0.034	0.041***	0.068***	0.050***	-0.024
	(1.07)	(8.29)	(7.80)	(12.50)	(5.86)	(-1.63)	(5.57)	(5.59)	(9.52)	(-1.57)
SameST	0.008	0.023***	0.018***	0.004	0.157***	0.030	0.033***	0.050***	0.009	0.129***
	(0.55)	(6.89)	(3.80)	(1.34)	(19.69)	(1.33)	(4.54)	(5.39)	(1.52)	(9.95)
Diff_AGE	0.002***	-0.001***	-0.001***	0.000***	0.000	-0.002***	-0.001***	0.000	0.000	-0.006***
	(5.24)	(-6.75)	(-5.53)	(4.06)	(-0.22)	(-3.57)	(-3.17)	(1.20)	(-0.61)	(-13.68)
Diff_ROA	-2.478***	0.148***	-0.015	0.025**	0.556***	-2.455***	0.048***	0.028	0.004	0.351***
	(-29.30)	(11.87)	(-0.84)	(2.52)	(22.09)	(-25.67)	(2.83)	(1.17)	(0.31)	(11.40)
Diff_EPS	-0.27***	0.005***	0.006***	-0.002***	-0.029***	-0.356***	-0.005**	0.010***	0.002	-0.064***
	(-41.43)	(5.46)	(4.83)	(-3.13)	(-17.18)	(-31.68)	(-2.37)	(3.82)	(1.45)	(-20.16)
Diff_BTM	-0.634***	0.005*	0.028***	0.003	-0.234***	-0.892***	0.015***	0.044***	0.008**	-0.318***
	(-29.55)	(1.94)	(8.57)	(1.62)	(-38.38)	(-25.38)	(2.70)	(5.03)	(2.21)	(-31.97)
Diff_LEV	-1.107***	-0.047***	0.017	0.003	-0.044***	-0.692***	-0.075***	-0.068***	-0.036***	-0.091***
	(-17.90)	(-5.70)	(1.39)	(0.48)	(-2.73)	(-8.44)	(-4.65)	(-2.75)	(-2.89)	(-3.31)
Diff_AT	-0.037***	0.004***	-0.003***	-0.017***	0.018***	0.059***	0.009***	-0.014***	-0.026***	-0.095***
	(-4.97)	(3.23)	(-1.65)	(-17.17)	(5.01)	(4.42)	(3.30)	(-2.90)	(-10.70)	(-14.21)
Diff_INT	0.052	-0.064***	-0.047***	-0.076***	0.061***	-0.221***	-0.174***	-0.119***	-0.058***	-0.415***
	(1.18)	(-7.21)	(-3.43)	(-10.50)	(3.35)	(-3.32)	(-9.27)	(-4.70)	(-4.17)	(-12.49)
Diff_EMP	2.073***	0.914***	1.261***	1.125***	0.211	3.856***	1.251**	1.564***	1.414***	0.828
	(2.70)	(4.09)	(5.22)	(6.91)	(0.65)	(3.54)	(2.51)	(2.96)	(4.47)	(1.19)
Diff_PRC	0.010***	0.000***	-0.001***	0.000	0.003***	0.016***	0.000	0.001***	-0.001***	0.005***
	(25.22)	(-3.85)	(-6.73)	(0.34)	(18.33)	(24.22)	(-0.17)	(3.27)	(-4.40)	(15.55)
Diff_GRW	-0.481***	-0.010**	0.045***	0.000	0.023***	-0.361***	-0.025***	-0.104***	-0.030***	0.109***
	(-16.71)	(-2.32)	(6.67)	(0.12)	(2.85)	(-12.40)	(-3.89)	(-10.01)	(-5.75)	(10.14)

Diff_MVE	-0.136***	-0.008***	0.000	-0.004***	-0.338***	-0.253***	-0.02***	-0.015***	0.004*	-0.318***
	(-17.12)	(-6.86)	(0.12)	(-3.87)	(-82.70)	(-18.42)	(-7.33)	(-3.34)	(1.67)	(-42.50)
Diff_CFO	0.120	-0.015	-0.097***	-0.007	0.194***	-0.891***	0.058***	-0.024	0.019	0.354***
	(1.45)	(-1.18)	(-5.21)	(-0.67)	(8.11)	(-9.36)	(2.99)	(-0.82)	(1.25)	(11.77)
Diff_CFI	-0.415***	-0.011	-0.091***	-0.005	0.054***	-0.283***	-0.017	-0.16***	-0.054***	0.123***
	(-9.22)	(-1.28)	(-7.28)	(-0.68)	(3.76)	(-5.30)	(-1.30)	(-8.32)	(-5.01)	(6.07)
Diff_CFF	0.795***	-0.006	-0.072***	-0.033***	-0.080***	0.752***	-0.002	-0.078***	-0.049***	-0.247***
	(21.66)	(-1.02)	(-8.01)	(-6.81)	(-7.55)	(16.75)	(-0.26)	(-6.10)	(-6.88)	(-16.18)
LnAT_i	0.195***	0.003*	0.019***	0.037***	0.341***	0.191***	0.015***	0.023***	0.044***	0.48***
	(21.81)	(1.72)	(7.02)	(26.25)	(77.58)	(17.34)	(4.95)	(4.59)	(20.62)	(63.71)
LnAT_j	0.149***	0.000	0.021***	0.037***	0.306***	0.162***	0.016***	0.024***	0.046***	0.478***
	(60.11)	(0.20)	(35.71)	(49.97)	(177.27)	(44.37)	(13.99)	(17.19)	(29.09)	(74.71)
ROA_i	2.803***	0.110***	0.005	-0.078***	0.269***	1.443***	0.074***	-0.008	-0.115***	-0.367***
	(22.73)	(5.65)	(0.20)	(-5.59)	(7.32)	(12.20)	(3.10)	(-0.23)	(-6.44)	(-8.70)
ROA_j	2.638***	0.145***	0.010	-0.071***	0.323***	1.308***	0.081***	-0.004	-0.089***	-0.421***
	(42.88)	(17.94)	(1.01)	(-13.72)	(19.27)	(17.24)	(7.05)	(-0.31)	(-9.32)	(-15.67)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	75,046,447	75,046,447	75,046,447	75,046,447	75,046,447	4,615,177	4,615,177	4,615,177	4,615,177	4,615,177
R-squared	0.292	0.004	0.010	0.004	0.345	0.318	0.011	0.069	0.007	0.374

This table presents the results of the tests in which we investigate whether firm-pairs in the same life cycle stage have greater accounting comparability (columns 1 and 6) and greater synchronicity in their return on assets (columns 2 and 7), sales (columns 3 and 8), capital expenditures (columns 4 and 9), and returns (columns 5 and 10). The sample includes all firm-pairs in Compustat and CRSP over the period 1987-2017 with available data to calculate the variables of interest and the control variables. Columns (1) to (5) report the results on the full sample that includes all firm-pairs, while Columns (6) to (10) report the results on a subset of firm-pairs active in the same Fama French 48 Industry. We use the Defranco et al. (2011) measure to capture accounting comparability between two firms in a pair (*Acctcomp*) and measure synchronicity as the natural logarithm of the R-squared of a regression of firm *i*'s return on assets/sales/capital expenditures on firm *j*'s return on assets/sales/capital expenditures over the three-year period (12 quarters) that ends at fiscal year-end (*Synch_ROA*; *Synch_Sale; Synch_Capx*). We measure stock return synchronicity (*Synch_Ret*) as the natural logarithm of the R-squared of a regression of daily stock returns of firm *i* on the daily stock returns of firm *j*, over the 12-month period in fiscal year *t*. We control for other determinants of accounting comparability and performance and return synchronicity. All control variables are measured at the end of the fiscal year. *SameEX* is an indicator variable that is equal to one if both firms are listed on the same stock exchange (based on CRSP data), and zero otherwise. *SameST* is an indicator variable that is equal to one if both firms are headquartered in the same state, and zero otherwise. *Diff_AGE* is the absolute difference in firm age. *Diff_ROA* is the absolute difference in return on assets (IB / lagged AT). *Diff_EPS* is the absolute difference in earnings per share (IB / CSHO). *Diff_BTM* is the absolute difference in the book-to-market ratio (SE / PRCC_F*CSHO). *Diff_LEV* is the absolute difference in leverage (DLC + DLTT / AT). *Diff_AT* is the absolute difference in log assets (AT). *Diff_INT* is the absolute difference in intangible asset intensity (INTAN / AT). *Diff_EMP* is the absolute difference in employee intensity (EMP / AT). *Diff_PRC* is the absolute difference in stock price (PRCC_F). *Diff_GRW* is the absolute difference in sales growth ([SALE / lagged SALE]-1). *Diff_MVE* is the absolute difference in log market capitalization (PRCC_F*CSHO). *LnAT* is the natural logarithm of total assets of firm *i* and *j* (AT). *ROA* is the return on assets of firm *i* and *j* (IB / lagged AT). Reported T-statistics are based on standard errors clustered at firm level (firm *i*). Continuous non-return and non-log measures are winsorized at the 1st and 99th percentile. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively (two-tailed).

TABLE 2
Sample Selection

All firm-quarters in Compustat-CRSP merged during	820,512
Less: Firms not traded on NYSE, AMEX, or NASDAQ	(6,359)
Less: Firms with no December fiscal year-end	(284,376)
Less: Missing industry or industry = Financial & Utilities	(156,623)
Less: Missing analyst forecast	(128,622)
Less: Missing life cycle information	(13,641)
Less: Missing announcement CARs	(238)
Final Sample	**230,653**

TABLE 3

Descriptive Statistics

Variable	N	Mean	Std. Dev	P25	Median	P75
			All Firms			
Introduction	230,653	0.130	0.336	0.000	0.000	0.000
Growth	230,653	0.337	0.473	0.000	0.000	1.000
Mature	230,653	0.392	0.488	0.000	0.000	1.000
Shakeout	230,653	0.077	0.267	0.000	0.000	0.000
Decline	230,653	0.065	0.246	0.000	0.000	0.000
NYSE	230,653	0.450	0.498	0.000	0.000	1.000
AMEX	230,653	0.042	0.200	0.000	0.000	0.000
NASDAQ	230,653	0.508	0.500	0.000	1.000	1.000
CAR3_VW	230,653	-0.001	0.095	-0.041	-0.001	0.04
CAR3_SZ	222,339	0.000	0.095	-0.040	0.000	0.041
Analyst	230,653	6.233	5.872	2.000	4.000	9.000
FE	217,050	0.002	0.020	-0.002	0.000	0.002
MVE	226,946	6.485	1.87	5.132	6.379	7.701
Lev	221,228	0.245	0.237	0.036	0.217	0.373
BTM	226,896	0.534	0.469	0.244	0.43	0.698
ROA	225,941	-0.005	0.059	-0.006	0.009	0.021
Loss	230,653	0.307	0.461	0.000	0.000	1.000
CFO	212,839	0.011	0.057	-0.004	0.019	0.040
CFF	212,767	0.020	0.112	-0.014	0.000	0.011
CFI	212,783	-0.028	0.076	-0.035	-0.014	-0.004
Sgrowth	207,865	0.111	0.485	-0.024	0.083	0.229
Sales	230,130	689,888	1790,369	25,899	112,068	467,856
Tothold	230,653	134.665	183.141	31.000	80.000	163.000
Trahold	230,653	36.175	39.922	9.000	24.000	50.000
Dedhold	230,653	1.955	2.918	0.000	1.000	2.000
Qixhold	230,653	89.388	131.351	20.000	49.000	102.000
			Large Announcing Firms			
Introduction	15,355	0.200	0.400	0.000	0.000	0.000
Growth	15,355	0.202	0.401	0.000	0.000	0.000
Mature	15,355	0.204	0.403	0.000	0.000	0.000
Shakeout	15,355	0.200	0.400	0.000	0.000	0.000
Decline	15,355	0.195	0.396	0.000	0.000	0.000
NYSE	15,355	0.780	0.414	0.000	1.000	1.000
AMEX	15,355	0.021	0.144	0.000	0.000	0.000
NASDAQ	15,355	0.199	0.399	0.000	0.000	0.000
CAR3_VW	15,355	-0.003	0.081	-0.033	-0.001	0.03

CAR3_SZ	14,133	-0.002	0.081	-0.033	-0.001	0.030
Analyst	15,355	9.994	7.518	4.000	9.000	15.000
FE	14,721	0.004	0.023	-0.002	0.000	0.003
MVE	15,040	8.339	2.292	6.534	8.418	10.161
Lev	14,486	0.304	0.208	0.167	0.281	0.410
BTM	15,035	0.582	0.501	0.277	0.494	0.776
ROA	15,046	0.003	0.036	-0.002	0.008	0.018
Loss	15,355	0.272	0.445	0.000	0.000	1.000
CFO	13,961	0.009	0.040	-0.008	0.014	0.031
CFF	13,937	0.002	0.059	-0.018	-0.002	0.011
CFI	13,950	-0.009	0.049	-0.022	-0.009	0.000
Sgrowth	14,535	0.095	0.361	-0.039	0.061	0.192
Sales	15,355	4145,308	4611,567	368,831	2,033	6,808
Tothold	15,355	350.614	385.226	84.000	207.000	486.000
Trahold	15,355	74.912	68.847	24.000	55.000	103.000
Dedhold	15,355	5.240	5.727	1.000	3.000	7.000
Qixhold	15,355	250.608	284.307	53.000	137.000	352.000
Life Cycle Peers						
Peer_Introduction	4,453,143	0.135	0.341	0.000	0.000	0.000
Peer_Growth	4,453,143	0.341	0.474	0.000	0.000	1.000
Peer_Mature	4,453,143	0.383	0.486	0.000	0.000	1.000
Peer_Shakeout	4,453,143	0.077	0.266	0.000	0.000	0.000
Peer_Decline	4,453,143	0.065	0.246	0.000	0.000	0.000
Peer_NYSE	4,453,143	0.435	0.496	0.000	0.000	1.000
Peer_AMEX	4,453,143	0.045	0.208	0.000	0.000	0.000
Peer_NASDAQ	4,453,143	0.519	0.500	0.000	1.000	1.000
Peer_CAR3_VW	4,452,631	0.000	0.060	-0.024	-0.002	0.022
Peer_CAR3_SZ	4,280,298	0.000	0.059	-0.024	-0.001	0.021
Peer_Analyst	4,453,143	6.011	5.780	2.000	4.000	8.000
Peer_MVE	4,378,318	6.399	1.864	5.055	6.290	7.607
Peer_Lev	4,274,370	0.246	0.240	0.036	0.218	0.376
Peer_BTM	4,377,376	0.541	0.486	0.245	0.434	0.705
Peer_ROA	4,354,510	-0.007	0.061	-0.008	0.009	0.021
Peer_Loss	4,453,143	0.320	0.466	0.000	0.000	1.000
Peer_CFO	4,099,312	0.010	0.059	-0.005	0.019	0.04
Peer_CFF	4,097,991	0.022	0.117	-0.013	0.000	0.012
Peer_CFI	4,098,302	-0.029	0.078	-0.036	-0.014	-0.004
Peer_Sgrowth	3,989,573	0.113	0.495	-0.026	0.085	0.235
Peer_Sales	4,442,449	635.36	1661.305	23.951	101.766	424.408
Peer_Tothold	4,453,143	127.788	176.85	29.000	75.000	154.000
Peer_Trahold	4,453,143	34.674	38.941	8.000	23.000	47.000

Peer_Dedhold	4,453,143	1.848	2.79	0.000	1.000	2.000
Peer_Qixhold	4,453,143	84.390	126.499	18.000	46.000	96.000

This table reports descriptive statistics of the variables used in the analyses. The sample consists of 230,653 firm-quarter observations over the period 1987-2017. The sample with large announcing firms consists of firm-quarter observations of the 25 largest firms (by sales) in a fiscal quarter and life cycle stage. The sample of life cycle peers consists of firm-quarter observations of all firms in the same fiscal quarter and life cycle stage as the large announcing firm that do not have a concurrent earnings announcement (i.e., during the period that starts two days prior to the announcing firm's earnings announcement and ends two days after the announcing firm's earnings announcement). *Introduction* is an indicator variable that is equal to one if the firm is in the introduction stage, zero otherwise. *Growth* is an indicator variable that is equal to one if the firm is in the growth stage, zero otherwise. *Mature* is an indicator variable that is equal to one if the firm is in the mature stage, zero otherwise. *Shakeout* is an indicator variable that is equal to one if the firm is in the shakeout stage, zero otherwise. *Decline* is an indicator variable that is equal to one if the firm is in the decline stage, zero otherwise. Life cycle assignments are based on cash flow patterns, following Dickinson (2011). *NYSE*, *AMEX*, and *NASDAQ* are indicator variables that are equal to one if the firm's main stock exchange listing is on the New York Stock Exchange, American Stock Exchange, or National Association of Securities Dealers Automated Quotation System, respectively, zero otherwise. *CAR3_VW* is the cumulative abnormal return around the earnings announcement using CRSP value-weighted returns to calculate daily abnormal returns. *CAR3_SZ* is the cumulative abnormal return around the earnings announcement using CRSP size deciles to calculate daily abnormal returns. *Analyst* is equal to the number of analysts issuing a quarterly earnings forecast. *FE* is the signed analyst forecast error, calculated as the firm's actual earnings as reported by I/B/E/S, less the latest consensus (mean) forecast issued prior to the end of the fiscal quarter, scaled by the stock price (PRCCQ) at the end of the fiscal quarter. *MVE* is the market capitalization at the end of the fiscal quarter (PRCCQ*CSHOQ). *Lev* is the percentage of debt in a firm's capital structure [(DLTTQ+DLCQ] / ATQ). *BTM* is the book-to-market ratio (SEQQ / [PRCCQ*CSHOQ]). *ROA* is the quarterly return on assets (IBQ / lagged ATQ). *Loss* is an indicator variable that is equal to one if the firm reports a loss (IBQ < 0), zero otherwise. *CFO*, *CFF*, and *CFI* are (scaled) quarterly cash flows from operating, financing, and investing activities, respectively. *Sgrowth* is the percentage change in sales between the current quarter and the same fiscal quarter in the prior year. Sales are quarterly sales (*SALEQ*). *Tothold*, *Trahold*, *Dedhold*, and *Qixhold* are the number of (all, transient, dedicated, index-following) institutions that own stock in the firm at the end of the quarter. Variables that start with *Peer_* are defined analogously but refer to measures for the matched life cycle peers. *Peer_CAR3_VW* and *Peer_CAR3_SZ* are the non-announcing peer firm's three-day cumulative abnormal returns around the announcing firm's earnings announcement. Continuous non-return and non-log measures are winsorized at the 1st and 99th percentile.

TABLE 4

Intra-Life Cycle Information Transfers - Full Sample

Panel A: Regression of Life Cycle Peer Returns on Announcing Firm Returns

$Peer\_CAR\_VW = \alpha + \beta 1 CAR\_VW + \varepsilon$

Variable	Coefficient	t-statist	p-value
Intercept	0.00004	0.79	0.4290
CAR_VW	**0.01208**	**18.15**	**<.0001**
N = 4,452,631, R-Squared = 0.0002			

$Peer\_CAR\_SZ = \alpha + \beta 1 CAR\_SZ + \varepsilon$

Variable	Coefficient	t-stat.	p-value
Intercept	0.00028	4.69	<.0001
CAR_SZ	**0.00822**	**11.79**	**<.0001**
N = 3,742,782, R-Squared = 0.0000			

Panel B: Announcing Firm Earnings Surprises and Market Reactions

$Peer\_CAR\_VW = \alpha + \beta 1 SD + \varepsilon$

Variable	Coefficient	t-stat.	p-value
Intercept	-0.00058	-2.83	0.0197
SD	**0.00012**	**2.95**	**0.0163**
N = 10, R-Squared = 0.5458			

$Peer\_CAR\_SZ = \alpha + \beta 1 SD + \varepsilon$

Variable	Coefficient	t-stat.	p-value
Intercept	0.00008	0.83	0.4261
SD	**0.00006**	**2.68**	**0.0252**
N = 10, R-Squared = 0.4185			

Surprise Deciles (SD)	Announcing Returns		Life Cycle Peer Returns	
	CAR3_VW	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*
1	-2.65%	-2.90%	-0.1053%	-0.0095%
2	-1.86%	-1.80%	-0.0502%	0.0160%
3	-1.70%	-1.75%	-0.0167%	0.0309%
4	-1.15%	-1.16%	-0.0202%	0.0184%
5	-0.28%	-0.31%	0.0146%	0.0283%
6	0.19%	0.13%	0.0602%	0.0760%
7	0.73%	0.82%	0.0293%	0.0251%
8	1.14%	1.12%	0.0275%	0.0454%
9	1.47%	1.58%	-0.0214%	0.0218%
10	2.33%	2.51%	0.0507%	0.0717%
D10 - D1	**4.98%**	**5.41%**	**0.1560%**	**0.0812%**
t-stat.	**180.34**	**175.86**	**8.54**	**4.41**
p-value	**<.0001**	**<.0001**	**<.0001**	**<.0001**

Panel C: Surprise Deciles and Market Reactions: Analysis by Life Cycle Stage

	D1	D10	D10 - D1	t-statistic	p-value
Introduction					
Peer_CAR3_VW	-0.1790%	0.0307%	0.2100%	4.88	<.0001
Peer_CAR3_SZ	-0.0370%	0.0015%	0.0389%	0.90	0.3676
Growth					
Peer_CAR3_VW	-0.0150%	-0.0080%	0.0076%	0.31	0.7562
Peer_CAR3_SZ	0.0665%	0.0465%	-0.0020%	-0.82	0.4117
Mature					
Peer_CAR3_VW	0.0168%	0.1060%	0.0892%	3.40	0.0007
Peer_CAR3_SZ	0.0234%	0.0993%	0.0758%	2.88	0.0039
Shakeout					
Peer_CAR3_VW	-0.1550%	0.0171%	0.1730%	2.70	0.0070
Peer_CAR3_SZ	-0.1640%	0.1060%	0.2700%	4.21	<.0001
Decline					
Peer_CAR3_VW	-0.1320%	0.1600%	0.2930%	4.83	<.0001
Peer_CAR3_SZ	-0.0260%	0.1750%	0.2010%	3.31	0.0009

This table reports the results of the tests investigating life cycle information transfers on the full sample of peer firms. The sample of life cycle peers consists of firm-quarter observations of all firms in the same fiscal quarter and life cycle stage as the large announcing firm that do not have a concurrent earnings announcement (i.e., during the period that starts two days prior to the announcing firm's earnings announcement and ends two days after the announcing firm's earnings announcement). Panel A reports the results of a regression of non-announcing peer firms' three-day cumulative abnormal returns around an announcing firm's earnings announcement on the announcing firm's own earnings announcement cumulative abnormal return. T-statistics and p-values are based on standard errors clustered at peer firm level. Panel B reports the analysis conditional on the announcing firm's earnings surprise. Specifically, *SD* is the quarterly decile rank of the announcing firms' scaled analyst forecast errors (*FE*). The first part of Panel B reports the results of a regression of the non-announcing peer firms' three-day cumulative abnormal returns around an announcing firm's earnings announcement on the announcing firm's earnings surprise decile rank. The second part of Panel B reports announcing firms' and non-announcing peers' average returns in each of the earnings surprise deciles and estimates the return differential between firms in earnings surprise decile 10 and earnings surprise decile 1. Panel C reports the return differential between firms in earnings surprise decile 10 and earnings surprise decile 1 for each of the life cycle stages separately. Variable definitions can be found in Table 3.

TABLE 5

Regression Specification of Intra-Life Cycle Information Transfers

Variables	*Peer Return*							
	CAR_VW	*CAR_SZ*	*CAR_VW*	*CAR_SZ*	*CAR_VW*	*CAR_SZ*	*CAR_VW*	*CAR_SZ*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	-0.019	-0.013	-0.022	-0.015	-0.022	-0.015	-0.021	-0.015
	(-0.96)	(-0.82)	(-1.08)	(-0.92)	(-1.09)	(-0.93)	(-1.05)	(-0.93)
Low_Decile	**-0.002*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **
	(-7.32)	**(-4.40)**	**(-5.39)**	**(-3.47)**	**(-5.26)**	**(-3.35)**	**(-5.37)**	**(-3.34)**
MVE			0.001***	0.001***	0.001***	0.001***	0.000***	0.001***
			(6.95)	(7.69)	(6.95)	(7.52)	(5.12)	(6.72)
Peer_MVE			-0.000***	-0.001***	-0.000***	-0.001***	-0.000***	-0.001***
			(-4.33)	(-6.24)	(-4.20)	(-6.13)	(-4.37)	(-6.10)
Lev			0.001*	0.002***	0.001**	0.002***	0.002**	0.002***
			(1.78)	(3.38)	(1.99)	(3.56)	(2.48)	(3.95)
Peer_Lev			-0.001	-0.001*	-0.001	-0.001*	-0.001	-0.001
			(-1.14)	(-1.77)	(-1.13)	(-1.77)	(-0.96)	(-1.61)
BTM			-0.000	0.000	-0.000	0.000	-0.000	0.000
			(-0.64)	(1.13)	(-0.59)	(1.16)	(-0.53)	(1.09)
Peer_BTM			0.003***	0.003***	0.003***	0.003***	0.003***	0.003***
			(6.72)	(6.02)	(6.64)	(5.97)	(6.77)	(6.09)
ROA			0.014***	0.016***	0.015***	0.016***	0.015***	0.016***
			(3.65)	(4.04)	(3.74)	(3.97)	(3.74)	(4.10)
Peer_ROA			-0.001	-0.001	-0.001	-0.001	0.000	0.000
			(-0.16)	(-0.19)	(-0.30)	(-0.17)	(0.03)	(0.07)
Loss			0.001***	0.002***	0.001***	0.002***	0.001***	0.002***
			(3.54)	(4.73)	(3.54)	(4.76)	(3.63)	(4.82)
Peer_Loss			-0.001***	-0.001**	-0.001***	-0.001***	-0.001***	-0.001***
			(-2.81)	(-2.54)	(-2.95)	(-2.59)	(-2.92)	(-2.84)
CFO					0.002	0.005	0.002	0.006
					(0.39)	(1.10)	(0.51)	(1.30)
CFF					0.002	0.002	0.003	0.002
					(0.58)	(0.45)	(0.74)	(0.50)
CFI					0.007	0.006	0.007	0.005
					(1.57)	(1.50)	(1.63)	(1.15)
Peer_CFO					-0.001	-0.001	0.000	-0.000
					(-0.29)	(-0.41)	(0.02)	(-0.05)
Peer_CFF					-0.002	-0.001	-0.003**	-0.003**
					(-1.27)	(-0.79)	(-2.51)	(-2.17)
Peer_CFI					0.001	0.001	0.001	0.000
					(0.43)	(0.31)	(0.33)	(0.08)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Life Cycle FE	No	No	No	No	No	No	Yes	Yes
Abs(Diff_CF)	No	No	No	No	No	No	Yes	Yes
Observations	418,683	418,683	418,683	418,683	418,683	418,683	418,683	418,683
R-squared	0.002	0.001	0.003	0.002	0.003	0.002	0.003	0.002

This table reports the results of the regression counterpart of the hedge return test (decile 10 – decile 1) reported in Panel B of Table 4. Specifically, we restrict the sample to peer firms matched to announcing firms in earnings surprise deciles 1 and 10 and create an indicator variable, *Low_Decile*, that is equal to one for (peer) firms in decile 1, and zero for (peer) firms in decile 10. Column (1) and (2) report results controlling for (fiscal year, fiscal quarter, and industry [Fama French 48]) fixed effects only. Control variables are added in columns (3) and (4), while columns (5) and (6) further include the announcing and peer firm's quarterly cash flow levels (OANCF / lagged ATQ, *Peer_CFO*; FINCF / lagged ATQ, *Peer_CFF*; IVNCF / lagged ATQ, *Peer_CFI*). Columns (7) and (8) further include the absolute differences between announcing and peer firm's annual cash flow levels (*Diff_CFO*, *Diff_CFF*, and *Diff_CFI*) as well as life cycle stage fixed effects. Reported T-statistics are based on standard errors clustered at peer firm level. Continuous non-return and non-log measures are winsorized at the 1st and 99th percentile. *, **, and *** indicate statistical significance at the 10%, %%, and 1% levels, respectively (two-tailed). All other variables are defined in Table 3.

TABLE 6

Intra-Life Cycle Information Transfers – Different Industry

Panel A: Regression of Life Cycle Peer Returns on Announcing Firm Returns

$Peer\_CAR\_VW = \alpha + \beta 1 CAR\_VW + \varepsilon$

Variable	Coefficient	t-statistic	p-value
Intercept	0.00006	1.09	0.2763
CAR_VW	**0.00944**	**14.23**	**<.0001**
N = 4,246,415, R-Squared = 0.0001			

$Peer\_CAR\_SZ = \alpha + \beta 1 CAR\_SZ + \varepsilon$

Variable	Coefficient	t-statistic	p-value
Intercept	0.00030	4.92	<.0001
CAR_SZ	**0.00571**	**8.27**	**<.0001**
N = 3,578,780, R-Squared = 0.0000			

Panel B: Announcing Firm Earnings Surprises and Market Reactions

$Peer\_CAR\_VW = \alpha + \beta 1 SD + \varepsilon$

Variable	Coefficient	t-statistic	p-value
Intercept	-0.00049	-2.12	0.0633
SD	**0.00011**	**2.35**	**0.0433**
N = 10, R-Squared = 0.4564			

$Peer\_CAR\_SZ = \alpha + \beta 1 SD + \varepsilon$

Variable	Coefficient	t-statistic	p-value
Intercept	0.00017	1.47	0.1762
SD	**0.00004**	**1.63**	**0.1366**
N = 10, R-Squared = 0.2712			

Surprise Deciles (SD)	Announcing Returns		Life Cycle Peer Returns	
	CAR3_VW	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*
1	-2.67%	-2.90%	-0.1045%	-0.0065%
2	-1.87%	-1.82%	-0.0345%	0.0309%
3	-1.72%	-1.76%	-0.0118%	0.0366%
4	-1.15%	-1.16%	-0.0195%	0.0179%
5	-0.27%	-0.29%	0.0232%	0.0353%
6	0.20%	0.14%	0.0531%	0.0679%
7	0.73%	0.82%	0.0393%	0.0350%
8	1.14%	1.12%	0.0196%	0.0369%
9	1.47%	1.58%	-0.0250%	0.0166%
10	2.34%	2.52%	0.0418%	0.0637%
D10 - D1	**5.01%**	**5.41%**	**0.1462%**	**0.0702%**
t-statistic	**177.11**	**172.23**	**7.84**	**3.74**
p-value	**<.0001**	**<.0001**	**<.0001**	**0.0002**

Panel C: Surprise Deciles and Market Reactions: Analysis by Life Cycle Stage

	D1	D10	D10 - D1	t-statistic	p-value
Introduction					
Peer_CAR3_VW	-0.1760%	-0.0380%	0.2090%	4.75	<.0001
Peer_CAR3_SZ	-0.0350%	0.0107%	0.0452%	1.03	0.3040
Growth					
Peer_CAR3_VW	-0.0190%	-0.0220%	-0.0030%	-0.12	0.9064
Peer_CAR3_SZ	0.0643%	0.0315%	-0.0330%	-1.31	0.1904
Mature					
Peer_CAR3_VW	0.0241%	0.0977%	0.0736%	2.76	0.0058
Peer_CAR3_SZ	0.0270%	0.0912%	0.0642%	2.40	0.0162
Shakeout					
Peer_CAR3_VW	-0.1320%	0.0200%	0.1520%	2.34	0.0193
Peer_CAR3_SZ	-0.1400%	0.1050%	0.2450%	3.76	0.0002
Decline					
Peer_CAR3_VW	-0.1390%	0.1410%	0.2800%	4.49	<.0001
Peer_CAR3_SZ	-0.0220%	0.1550%	0.1760%	2.83	0.0047

This table reports the results of the tests investigating life cycle information transfers on a sample of peer firms that excludes life cycle peers that are also industry peers (based on the Fama French 48 industry classification). The sample of life cycle peers consists of firm-quarter observations of all firms in the same fiscal quarter and life cycle stage as the large announcing firm that do not have a concurrent earnings announcement (i.e., during the period that starts two days prior to the announcing firm's earnings announcement and ends two days after the announcing firm's earnings announcement) and that are not active in the same industry as the announcing firm. Panel A reports the results of a regression of non-announcing peer firms' three-day cumulative abnormal returns around an announcing firm's earnings announcement on the announcing firm's own earnings announcement cumulative abnormal return. T-statistics and p-values are based on standard errors clustered at peer firm level. Panel B reports the analysis conditional on the announcing firm's earnings surprise. Specifically, *SD* is the quarterly decile rank of the announcing firms' scaled analyst forecast errors (*FE*). The first part of Panel B reports the results of a regression of the non-announcing peer firms' three-day cumulative abnormal returns around an announcing firm's earnings announcement on the announcing firm's earnings surprise decile rank. The second part of Panel B reports announcing firms' and non-announcing peers' average returns in each of the earnings surprise deciles and estimates the return differential between firms in earnings surprise decile 10 and earnings surprise decile 1. Panel C reports the return differential between firms in earnings surprise decile 10 and earnings surprise decile 1 for each of the life cycle stages separately. Variable definitions can be found in Table 3.

TABLE 7

Regression Specification of Intra-Life Cycle Information Transfers – Different Industry

Variables	*Peer Return*							
	CAR_VW	*CAR_SZ*	*CAR_VW*	*CAR_SZ*	*CAR_VW*	*CAR_SZ*	*CAR_VW*	*CAR_SZ*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	-0.023	-0.016	-0.025	-0.018	-0.025	-0.018	-0.024	-0.018
	(-1.09)	(-0.98)	(-1.18)	(-1.04)	(-1.18)	(-1.05)	(-1.14)	(-1.04)
Low_Decile	**-0.002*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **	**-0.001*** **
	(-6.94)	**(-3.94)**	**(-5.32)**	**(-3.34)**	**(-5.20)**	**(-3.21)**	**(-5.29)**	**(-3.21)**
MVE			0.000***	0.001***	0.001***	0.001***	0.000***	0.001***
			(6.41)	(7.27)	(6.23)	(6.94)	(4.19)	(6.04)
Peer_MVE			-0.000***	-0.001***	-0.000***	-0.001***	-0.000***	-0.001***
			(-4.36)	(-6.23)	(-4.32)	(-6.20)	(-4.56)	(-6.22)
Lev			0.001*	0.002***	0.001**	0.002***	0.002**	0.003***
			(1.96)	(3.53)	(2.15)	(3.71)	(2.57)	(4.03)
Peer_Lev			-0.001	-0.001*	-0.001	-0.001*	-0.001	-0.001*
			(-1.20)	(-1.90)	(-1.19)	(-1.90)	(-1.02)	(-1.73)
BTM			-0.000	0.000	-0.000	0.000	-0.000	0.000
			(-0.21)	(1.61)	(-0.17)	(1.64)	(-0.07)	(1.59)
Peer_BTM			0.003***	0.003***	0.003***	0.003***	0.003***	0.003***
			(6.34)	(5.62)	(6.23)	(5.54)	(6.39)	(5.68)
ROA			0.012***	0.013***	0.012***	0.013***	0.012***	0.013***
			(3.01)	(3.36)	(3.03)	(3.23)	(2.96)	(3.30)
Peer_ROA			-0.001	-0.001	-0.002	-0.002	-0.001	-0.001
			(-0.19)	(-0.22)	(-0.59)	(-0.44)	(-0.21)	(-0.15)
Loss			0.001***	0.001***	0.001***	0.001***	0.001***	0.002***
			(3.18)	(4.40)	(3.24)	(4.49)	(3.34)	(4.55)
Peer_Loss			-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
			(-3.02)	(-2.71)	(-3.15)	(-2.75)	(-3.02)	(-2.95)
CFO					0.005	0.008*	0.006	0.009*
					(1.18)	(1.73)	(1.23)	(1.91)
CFF					0.005	0.003	0.006	0.004
					(1.24)	(0.81)	(1.48)	(0.93)
CFI					0.008*	0.008*	0.009**	0.007
					(1.94)	(1.79)	(2.04)	(1.50)
Peer_CFO					0.001	0.000	0.002	0.002
					(0.26)	(0.12)	(0.53)	(0.49)
Peer_CFF					-0.002	-0.001	-0.004**	-0.003**
					(-1.28)	(-0.81)	(-2.55)	(-2.20)
Peer_CFI					0.001	0.001	0.001	0.000
					(0.42)	(0.28)	(0.34)	(0.08)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Life Cycle FE	No	No	No	No	No	No	Yes	Yes
Abs(Diff_CF)	No	No	No	No	No	No	Yes	Yes
Observations	400,366	400,366	400,366	400,366	400,366	400,366	400,366	400,366
R-squared	0.002	0.001	0.003	0.002	0.003	0.002	0.003	0.002

This table reports the results of the regression counterpart of the hedge return test (decile 10 – decile 1) reported in Panel B of Table 7. Specifically, we restrict the sample to peer firms matched to announcing firms in earnings surprise deciles 1 and 10 and create an indicator variable, *Low_Decile*, that is equal to one for (peer) firms in decile 1, and zero for (peer) firms in decile 10. Column (1) and (2) report results controlling for (fiscal year, fiscal quarter, and industry [Fama French 48]) fixed effects only. Control variables are added in columns (3) and (4), while columns (5) and (6) further include the announcing and peer firm's quarterly cash flow levels (OANCF / lagged ATQ, *Peer_CFO*; FINCF / lagged ATQ, *Peer_CFF*; IVNCF / lagged ATQ, *Peer_CFI*). Columns (7) and (8) further include the absolute differences between announcing and peer firm's annual cash flow levels (*Diff_CFO*, *Diff_CFF*, and *Diff_CFI*) as well as life cycle stage fixed effects. Reported T-statistics are based on standard errors clustered at peer firm level. Continuous non-return and non-log measures are winsorized at the 1st and 99th percentile. *, **, and *** indicate statistical significance at the 10%, %%, and 1% levels, respectively (two-tailed). All other variables are defined in Table 3.

TABLE 8

The Role of Life Cycle in Intra-Industry Information Transfers

Panel A: Replicating Intra-Industry Information Transfers

Surprise Deciles (SD)	Announcing Returns		Industry Peer Returns	
	CAR3_VW	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*
1	-2.11%	-2.16%	-0.0551%	-0.0055%
2	-1.69%	-1.78%	-0.0913%	-0.0638%
3	-1.26%	-1.29%	0.0006%	0.0326%
4	-0.82%	-0.87%	-0.0734%	-0.0423%
5	-0.01%	-0.04%	0.0535%	0.0835%
6	0.62%	0.58%	0.0227%	0.0657%
7	1.07%	1.07%	0.0030%	0.0254%
8	1.51%	1.48%	-0.0324%	-0.0070%
9	1.78%	1.72%	-0.0018%	0.0249%
10	3.15%	3.44%	0.1862%	0.2103%
D10 - D1	5.27%	5.60%	0.2413%	0.2158%
t-stat.	**149.66**	**142.25**	**10.64**	**9.44**
p-value	**<.0001**	**<.0001**	**<.0001**	**<.0001**

Panel B: Intra-Industry Information Transfers Conditional on Same Life Cycle Stage

	Different Life Cycle Stage				Same Life Cycle Stage			
SD	Announcing Returns		Industry Peer Returns		Announcing Returns		Industry Peer Returns	
	CAR3_VW	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	-2.21%	-2.23%	-0.0440%	0.0019%	-1.92%	-2.02%	-0.0774%	-0.0205%
2	-1.74%	-1.85%	-0.1038%	-0.0724%	-1.60%	-1.67%	-0.0695%	-0.0486%
3	-1.27%	-1.31%	-0.0113%	0.0232%	-1.24%	-1.27%	0.0223%	0.0499%
4	-0.80%	-0.85%	-0.0994%	-0.0612%	-0.87%	-0.89%	-0.0222%	-0.0046%
5	-0.02%	-0.04%	0.0472%	0.0848%	-0.01%	-0.03%	0.0666%	0.0808%
6	0.63%	0.61%	0.0302%	0.0731%	0.59%	0.53%	0.0074%	0.0504%
7	1.08%	1.09%	-0.0231%	-0.0010%	1.03%	1.05%	0.0554%	0.0791%
8	1.41%	1.39%	-0.0918%	-0.0561%	1.70%	1.65%	0.0793%	0.0865%
9	1.76%	1.67%	-0.0109%	0.0190%	1.82%	1.83%	0.0149%	0.0359%
10	3.25%	3.56%	0.1580%	0.1879%	2.97%	3.21%	0.2386%	0.2519%
D10-D1	5.47%	5.79%	0.2020%	0.1860%	4.89%	5.24%	0.3160%	0.2725%
t-stat.	**120.48**	**114.30**	**6.87**	**6.29**	**89.69**	**85.65**	**9.12**	**7.79**
p-value	**<.0001**	**<.0001**	**<.0001**	**<.0001**	**<.0001**	**<.0001**	**<.0001**	**<.0001**

Diff. Peer CAR3_VW | Same LC: (7)–(3): 0.3160% - 0.2020% = -0.1140%; t-stat: 2.51; p-value: 0.0121

Diff. Peer CAR3_SZ | Same LC: (8)–(4): 0.2725% - 0.1860% = -0.0865%; t-stat: 1.89; p-value: 0.0591

This table reports the results of the tests investigating (the role of firm life cycle in) intra-industry information transfers on the full sample of peer firms. The sample of industry peers consists of firm-quarter observations of all firms in the same fiscal quarter and industry (Fama French 48) as the large announcing firm that do not have a concurrent earnings announcement (i.e., during the period that starts two days prior to the announcing firm's earnings announcement and ends two days after the announcing firm's earnings announcement). Large announcing firms are the ten largest firms (by sales) in an industry and fiscal quarter. *SD* is the quarterly decile rank of the announcing firms' scaled analyst forecast errors (*FE*). Panel A reports announcing firms' and non-announcing peers' average returns in each of the earnings surprise deciles and estimates the return differential between firms in earnings surprise decile 10 and earnings surprise decile 1. Panel B investigates intra-industry information transfers conditional on being in the same or a different life cycle stage and reports results of a t-test investigating whether the magnitude of intra-industry information transfers depends on whether the industry peer is in the same life cycle stage as the announcing firm. Variable definitions can be found in Table 3.

TABLE 9

Intra-Life Cycle Information Transfers and Institutional Cross-Holdings

Variables	*Peer Return*							
	CAR_VW	*CAR_SZ*	*CAR_VW*	*CAR_VW*	*CAR_SZ*	*CAR_SZ*	*CAR_VW*	*CAR_SZ*
	Main		Transient versus Long-Term (LT)				Percentage Transient	
			Transient	Long-Term	Transient	Long-Term		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	0.00541*	0.00909***	0.00511	0.00507	0.00821***	0.00877***	0.00460	0.00828***
	(1.72)	(3.01)	(1.64)	(1.61)	(2.75)	(2.91)	(1.43)	(2.67)
Low_Decile	-0.00069	-0.00378*	-0.00111	-0.00057	-0.00308	-0.00358*	-0.00033	-0.00344
	(-0.36)	(-1.90)	(-0.61)	(-0.30)	(-1.64)	(-1.81)	(-0.15)	(-1.56)
Inst_Overlap	0.00002***	0.00002***	0.00009***	0.00003***	0.00008***	0.00002***	0.00002***	0.00001***
	(8.05)	(7.24)	(6.97)	(8.02)	(6.33)	(7.18)	(3.31)	(2.61)
Low*Inst_Overlap	**-0.00001****	**-0.00001****	**-0.00004****	**-0.00001****	**-0.00004****	**-0.00001****	**-0.00000**	**0.00001**
	(-2.31)	**(-2.18)**	**(-2.32)**	**(-2.10)**	**(-2.15)**	**(-2.02)**	**(-0.00)**	**(0.81)**
Inst_Announce	0.00000***	0.00000***	0.00002***	0.00000***	0.00002***	0.00000***	-0.00000	0.00000
	(3.28)	(4.49)	(4.57)	(2.82)	(4.35)	(4.06)	(-0.26)	(0.71)
Low Inst_Announce*	0.00000**	-0.00000**	0.00001**	0.00000**	-0.00001*	-0.00000**	0.00000	-0.00001**
	(2.56)	(-2.37)	(2.14)	(2.44)	(-1.65)	(-2.35)	(0.42)	(-2.26)
Inst_Peer	0.00001***	0.00001***	0.00003***	0.00001***	0.00003***	0.00001***	0.00001***	0.00002***
	(3.86)	(4.51)	(3.35)	(3.63)	(3.04)	(4.38)	(3.43)	(5.09)
Low Inst_Peer*	0.00001**	0.00000	0.00002*	0.00001***	0.00001	0.00000	0.00000	-0.00000
	(2.53)	(0.27)	(1.78)	(2.60)	(0.82)	(0.31)	(1.09)	(-1.13)
Pct_Trs_Overlap							0.00020	0.00029
							(0.14)	(0.20)
*Low*Pct_Trs_Overlap*							0.00176	0.00337*
							(0.93)	(1.73)
*Inst_Overlap*Pct_Trs_Overlap*							0.00002	0.00003
							(0.62)	(1.02)
Low* Inst_Overlap*Pct_Trs_Overlap							**-0.00005**	**-0.00009****
							(-1.17)	**(-2.03)**
Pct_Trs_Announce							0.00029	-0.00062
							(0.21)	(-0.44)
*Low*Pct_Trs_Announce*							-0.00023	-0.00079
							(-0.12)	(-0.41)

*Inst_Announce*Pct_Trs_Announce*							0.00002***	0.00002**
							(2.91)	(2.39)
Low Inst_Announce*Pct_Trs_Announce*							0.00001	0.00001
							(1.14)	(0.92)
Pct_Trs_Peer							0.00205**	0.00294***
							(2.03)	(2.86)
*Low*Pct_Trs_Peer*							-0.00172	-0.00205
							(-1.26)	(-1.47)
*Inst_Peer*Pct_Trs_Peer*							-0.00001	-0.00003**
							(-0.75)	(-2.21)
Low Inst_Peer*Pct_Trs_Peer*							0.00001	0.00003
							(0.60)	(1.49)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Test Transient = LT			**Chi-Square: 4.96** p-value: 0.0260**		**Chi-Square: 4.20** p-value: 0.0403**			
Observations	490,512	478,576	490,512	490,512	478,576	478,576	490,512	478,576
R-Squared	0.004	0.003	0.004	0.004	0.003	0.003	0.004	0.003

This table reports the results of the regression specification investigating the effect of institutional cross-holdings on intra-life cycle information transfers. The sample contains all (peer) firms in earnings surprise deciles 1 and 10. *Low_Decile* is equal to one for (peer) firms in decile 1, and zero for (peer) firms in decile 10. *Inst_Overlap* is equal to the number of institutions that own shares in both the announcing firm and the life cycle peer firm. *Inst_Announce* is equal to the number of institutions that own shares in the announcing firm, but not the peer firms. *Inst_Peer* is equal to the number of institutions that own shares in the peer firm, but not the announcing firm. *Pct_Trs_Overlap* is equal to the number of transient institutions with cross-holdings divided by the total number of institutions with cross-holdings. *Pct_Trs_Announce* is equal to the number of transient institutions with holdings in the announcing firm divided by the total number of institutions with holdings in the announcing firm. *Pct_Trs_Peer* is equal to the number of transient institutions with holdings in the peer firm divided by the total number of institutions with holdings in the peer firm. All measures are calculated at the end of the fiscal quarter. Columns (1) and (2) report the results of the main analysis. Columns (3) to (6) report the results of separate regressions in which we distinguish between transient and long-term institutional owners based on the classification of Bushee (2001) and Bushee and Noe (2000). Columns (7) and (8) report the results of a regression that includes interactions with the number of transient institutions with (cross-)holdings, relative to all institutions with (cross-)holdings. Reported T-statistics are based on standard errors clustered at peer firm level. Continuous non-return and non-log measures are winsorized at the 1st and 99th percentile. *, **, and *** indicate statistical significance at the 10%, %%, and 1% levels, respectively (two-tailed). All other variables are defined in Table 3.

TABLE 10

Intra-Life Cycle Information Transfers – Hribar & Yehuda/Anthony & Ramesh Life Cycle Measure

Surprise Deciles (SD)	Announcing Returns		Life Cycle Peer Returns	
	CAR3_VW	*CAR3_SZ*	*CAR3_VW*	*CAR3_SZ*
1	-1.17%	-1.16%	-0.0016%	0.0193%
2	-1.35%	-1.33%	-0.0498%	-0.0076%
3	-0.86%	-0.98%	-0.0009%	0.0740%
4	-0.73%	-0.70%	-0.0078%	0.0152%
5	0.39%	0.36%	-0.0376%	0.0013%
6	0.48%	0.48%	0.0216%	0.0396%
7	1.25%	1.33%	0.0068%	0.0464%
8	1.42%	1.49%	0.0134%	0.0179%
9	1.46%	1.60%	0.0097%	0.0344%
10	2.18%	2.30%	0.0973%	0.0863%
D10 - D1	**3.35%**	**3.46%**	**0.0990%**	**0.0671%**
t-statistic	**190.55**	**161.78**	**7.41**	**4.98**
p-value	**<.0001**	**<.0001**	**<.0001**	**<.0001**

This table reports the results of the tests investigating life cycle information transfers on the full sample of peer firms, using an alternative life cycle measure following Anthony and Ramesh (1992) and Hribar and Yehuda (2015). Specifically, a firm's life cycle stage is determined based on the tercile rank of the sum of standardized two-year sales growth, standardized capital expenditures (including R&D) scaled by total assets, standardized net capital transactions (change in total stockholder's equity less net income) scaled by total assets, less standardized firm age. The sample of life cycle peers consists of firm-quarter observations of all firms in the same fiscal quarter and life cycle stage as the large announcing firm that do not have a concurrent earnings announcement (i.e., during the period that starts two days prior to the announcing firm's earnings announcement and ends two days after the announcing firm's earnings announcement). *SD* is the quarterly decile rank of the announcing firms' scaled analyst forecast errors (*FE*) and we report the announcing firms' and non-announcing peers' average returns in each of the earnings surprise deciles and estimates the return differential between firms in earnings surprise decile 1 and earnings surprise decile 10. Variable definitions can be found in Table 3.