

Does the Stock Market Fully Value Alternative Work Arrangements?

Work From Home and Equity Prices

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Abstract

We analyze the relationship between corporate reliance on alternative work arrangements and stock returns by documenting that an equal-weighted portfolio of the “100 Best Companies for Remote Working Jobs” earned an annualized four-factors alpha of 7.44% over the period 2014 to 2019. Firms included in the ranking also exhibited more pronounced positive earnings surprises and announcement returns. We conclude that even though Work From Home arrangements are beneficial to firm value through their effects on employees’ satisfaction and productivity, the stock market fails at fully valuing these contracts even when data are publicly available for a large number of corporations.

Keywords: Alternative Work Arrangements, Work From Home, Market Efficiency.

JEL Classification: G14, J28, M14.

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1. Introduction

Work From Home (WFH) is an increasingly diffuse practice in the United States. The percentage of telecommuters raised by more than 150% between 2005 and 2019, when about 27% of the American workforce reported to accomplish their work entirely from home (Bick, Blandin, and Martens, 2020). This trend has been further accelerated by the global spreading of the SARS-CoV-2 pandemic, which has caused WFH arrangements to increase to 35.2% in 2020, representing about 70% of the universe of teleworkable jobs in the American economy (Bick, Blandin, and Mertens, 2020; Dingel and Neiman, 2020). Yet, even though recent survey evidence shows that 78% of the CEOs of American corporations agree that remote working is here to stay for the long-term (PWC, 2020), little is known about whether this is – on average – a value enhancing management strategy. Available evidence is indeed based on case studies (i.e., Bloom, 2015), firm/job specific surveys (Groen, Triest, Coers, and Wtenweerde, 2018; and Mas and Pallais, 2017), and industry-wide analyses (Pagano, Wagner, and Zechner, 2020), exclusively, thus limiting our understanding of this complexed economic and social phenomenon.

The lack of conclusive empirical evidence has ignited a heated discussion concerning the relationship between the adoption of WFH policies and long-run stock returns among both market practitioners and academics.¹ Existing theories of the firm are indeed also insufficient to shed light on the nature of such a relationship, as they yield conflicting predictions as to whether these practices are beneficial to shareholders. In particular, traditional theories developed upon the 20th century capital-intensive enterprise model gravitates around the concept of cost efficiency, thus leaving little space for considerations concerning stakeholders' welfare within a rational framework. In such a simplified world in which employees' satisfaction emerges from being

¹ See, i.e., “Companies Start to Think Remote Work Isn’t So Great After All”, Chip Cutter, *The Wall Street Journal*, July 24, 2020.

overpaid or spending suboptimally low effort levels, WFH policies would indeed be value-enhancing if and only if their wage and productivity implications are favorable (or, at least, value neutral) for both parties (Taylor, 1911). Principal-agent theories reach similar conclusions, while further emphasizing moral hazard and adverse selection issues that might arise if employees' effort and skills are less observable in a telecommuting setting (Hornung et al., 2010).

Conversely, recent theoretical developments review the neo-classical role of employees within an organizational context, emphasizing the importance of human rather than physical capital (e.g., Becker 1993; Zingales, 2000; Berk, Stanton, and Zechner, 2010). Within this alternative framework, employees' satisfaction can improve retention and motivation, ultimately yielding shareholders value. Consequently, to the extent the WFH arrangements contribute to the well-being of employees and to corporate operating efficiency and flexibility, it might also contribute to shareholders' value creation (Spreitzer, Cameron, and Garrett, 2017).

Given extant literature inconclusiveness, establishing the relationship between corporate reliance on WFH arrangements and long-term stock returns is thus crucial for both managers and investors, especially in light of the imminent strategic decisions awaiting them at the end of the SARS-CoV-2 pandemic (Ernst & Young, 2020). Indeed, if corporate reliance on WFH policies affects firms' long-term performance negatively, the average corporation should not consider it as a mainstream working arrangement and investors should avoid firms doing so.

This paper evaluates the above hypotheses by using a quite different measure of firms' propensity to enact WFH arrangements to prior research, which addresses investors' lack of information. Since 2014, Forbes has been publishing the "100 Best Companies for Remote Working Jobs" list, a ranking developed by FlexJobs.com including the 100 US corporations relying the most on WFH arrangements based on the analysis of actual job posting published by

the covered firms. Forbes' coverage provides this list a particularly high visibility, and by being released every year in mid-January it attracts widespread attention as it discloses information on several large publicly traded corporations at the same time. Similarly to Edmans (2011) and Chamberlain (2015), we use this ranking to execute joint tests of corporate reliance upon WFH arrangements on both firm value and on whether or not this strategy is fully valued by the market. By constructing portfolios at the end of the month in which the ranking is published by Forbes, we document that portfolios of firms engaging in this strategy display a significant outperformance, which appears to be robust to a wide array of specifications. First, the obtained alpha is not driven by eventual outliers, as results are robust to winsorizing returns on both tails at both the 5% and 10% levels. Second, we document that results are not due to a simple reputational effect. Indeed, while the positive reaction to being included in this ranking is concentrated on firms making the cut for the very first time, we find no evidence of negative abnormal performance for corporations dropped from the list. The lack of abnormal returns suggests that while the inclusion in this ranking provides investors with material information concerning a firms' reliance upon WFH policies, which are perceived as value enhancing, the removal from the list is information neutral, consistent with investors (1) recognizing that the dropped firms are likely to still be engaging in this policy and (2) not discounting the eventual reputational effect that the inclusion in the list might have generated in the first place. Third, we document that the identified alphas do not stem from correlation with firms characteristics other than the Carhart (1997) systematic risk factors included in previous analyses. Fourth, we show that the identified effect is not due to eventual overlaps between the used ranking and the "100 Best Companies to Work For in America" list (Levering, Moskowitz, and Katz, 1984, Edmans, 2011).² We thus conclude that our tests cannot be interpreted

² In particular, we document that the actual overlapping between the two lists is extremely limited, with less than 5% of the total firm-year observations being included in both rankings over the studied period.

as indirect replications of the results reported in Edmans (2011), but rather capture a different and well identified economic dimensions – that is, corporate reliance on alternative work arrangements.

To shed lights on the channel through which WFH arrangements yield superior stock market performance, we build on our initial findings and hypothesize that corporate reliance on these alternative working contracts is beneficial to firm value through their effects on employees' satisfaction, productivity, and operational flexibility, but that this effect is not immediately capitalized by the market because it is intangible. Instead, it only affects stock prices when it subsequently manifests in tangible outcomes, resulting in superior returns and accounting performance. To show that this is the case, we follow Easterwood and Nutt (1999), Lim (2001), Teoh and Wong (2002), Giroud and Mueller (2011), and Edmans (2011) to study earnings announcement surprises. We document that analysts systematically underestimate Earnings Per Share (EPS) levels of WFH firms, consistent with the hypothesis that analysts fail at pricing eventual efficiency gains associated with corporate engagements in these alternative forms of contractual working arrangements. Consistent with this observation, we further document that the stock market reaction to earnings announcements is systematically more pronounced for WFH firms.

Finally, we posit and test for whether corporate reliance on alternative work arrangements contributes to increasing corporate resilience to black swan events. In particular, we extend our analysis to the calendar year 2020 to assess whether the outperformance of the firms included in the Flexjob.com list further increased during the lockdown period caused by the global spreading of the SARS-CoV-2 virus. We show this to be the case. In particular, we interpret these results as suggestive that reliance on WFH arrangements over the pre-SARS-COV2 period has provided

firms with a higher degree of flexibility and resilience to the pandemic shock, confirming and expanding industry-wide findings results documented in Pagano, Wagner, and Zechner (2020), Dingel and Neiman (2020), and Koren and Peto (2020).

Overall, these findings have three major implications. First, WFH arrangements are positively associated with shareholder returns, providing for the first time firm-level evidence supporting the hypothesis that the adoption of these working arrangements likely delivers material efficiency gains for US corporations, rather than resulting in moral hazard concerns. Second, the stock market does not fully capitalize the efficiency gains associated with these contractual arrangements, even when independently identified by a highly public survey of large corporations. Third, screening stocks along this previously unexplored dimension may improve investment returns and resilience to long-tail risk.

The remainder of the paper is organized as follows. Section 2 discusses the underlying theoretical motivations supporting the existence of an association between corporate reliance on alternative work arrangements and stock market returns. Section 3 presents summary statistics. Section 4 reports our main results. Section 5 investigates the channel through which the identified “mispricing” effect might materialize. Section 6 expands our analyses to the SARS-CoV-2 pandemic. Finally, Section 7 concludes.

2. Alternative work arrangements and stock market performance

Alternative work arrangements – and, in particular, WFH provisions - might result in superior stock market performance if (1) they yield productivity gains through their effect on employees wellbeing and on operational efficiency and flexibility, and (2) if such an effect is not immediately priced by the market. Conversely, if telecommuting creates monitoring problems exacerbating moral hazard and adverse selection issues, corporate reliance on alternative work arrangements

might result in shareholders value destruction. Section 2.1. and 2.2. review the economic, micro-organization behavior, and psychology literature to provide motivation and support for these alternative hypotheses.

2.1. Work From home, Employee Satisfaction, and Shareholders Value

Neo-classical theories of the firm develop from the simple perspective of a traditional capital intensive manufacturing corporation in which workers productivity is tangible and can be easily measured. In this Taylor (1911) world, output-based incentives (“piece rates”) are effective tools to design optimal compensation packages. However, in the modern intangible assets-based economy (Taylor and Peters, 2017), this contract design is likely inefficient as workers’ tasks are increasingly difficult to be defined and their value contribution to be assessed (e.g., customers service, stakeholders relationship). As the effectiveness of monetary incentives decreases, the importance of non-pecuniary considerations such as employee satisfaction becomes central in the design of an optimal compensation package (Kohn, 1993). As discussed in Akerlof and Yellen (1986), in this setting “excess” satisfaction and employees’ wellbeing enhancing investments may indeed result in increased effort levels and retention rates (Shapiro and Stiglitz, 1984). Furthermore, recent studies document that a more positive emotional state can result in more creativity (Isen et al., 1987), improved employees attitude and behavior (Baumeister et al., 2007), and, ultimately, higher productivity (Oswald et al., 2015; De Neve and Oswald, 2012).

While intuitive, the empirical identification of a positive association between employees’ wellbeing and shareholders value has been a contentious issue for over four decades. Early empirical studies found indeed no support for human relation based theories, often even identifying negative associations between employees satisfaction and firm performance (Abowd, 1989, Diltz, 1995, Dhrymes 1998, Gorton and Schmid, 2004). However, the recent emergence of more reliable

micro-data concerning this unobservable economic dimension has contributed to shed lights on the ultimately value enhancing nature of corporate investments in human relations. In particular, Huang, Li, Meschke, and Guthrie (2015) analyze more than 100,000 Glassdoor surveys collected between 2008 and 2013 and document that corporate culture, as perceived and assessed by employees, is positively associated with future firm performance. Exploiting a similar Glassdoor based dataset, Melian-Gonzalez, Bulchand-Gidumal, and Lopez-Valcarcel (2015) document that employees who have a more empowered and satisfied relationship with their employers are more motivated, and that such wellbeing materializes in improved operating margin, sales efficiency, and returns on assets. Moving from an accounting to a stock market performance perspective, Green, Huang, Wen, and Zhou (2017) document a robust positive association between changes in employees satisfaction, proxied by Glassdoor ratings, and stock returns. In particular, they document that portfolios including stocks of firms exhibiting the greatest quarterly improvements in their Glassdoor ratings systematically outperform those companies reporting the largest quarterly decline in employees' satisfaction. Consistent with these findings, Edmans (2011) and Chamberlain (2015) document that companies included in the "100 Best Companies to Work For in America" have systematically outperformed market and industry benchmarks over the last 2 decades. In particular, Edmans (2011) documents that these employees-oriented corporations exhibit more positive earnings surprises and announcement returns. He interprets these results as consistent with human relation theories, concluding that employees' satisfaction is positively correlated with shareholder returns, rather than representing forms of managerial slack. Moniz (2016) analyzes Glassdoor data on 2,237 US companies further confirming the existence of such a statistically significant relationship between employees' satisfaction and earnings surprises,

concluding that this economic dimension is not fully priced by the market due to its unobservable and intangible nature.

Based on these findings, one can presume that alternative work arrangements and, in particular, corporate reliance on WFH contracts might affect long-run stock market returns through an employees' satisfaction channel. However, the micro-organizational behavior and psychology literature on the association between the use of alternative work arrangements and employees' wellbeing are so far inconclusive (Spreitzer, Cameron, and Garrett, 2017). In particular, two major features of alternative work arrangements have been extensively scrutinized with respect to this issue. First, these contracts often feature flexible working schedules, which results in reduced work-family conflicts and employees exploitation through unpaid overtime (Hornung et al., 2008). Furthermore, the offer of WFH arrangements increases a job posting attractiveness and improve a firms' retention rate, especially with respect to high-skill workers who tend to reciprocate such a possibility with more engagement and higher productivity levels (Kossek and Michel; 2011). However, extant literature shows that the absence of a well-defined working schedule often results in the so called *autonomy paradox* (Mazmanian et al. 2013), defined as workers' tendency to work from anywhere and at any time when provided with more flexibility. Such a behavior exacerbates work-to-nonwork conflicts (Allen et al., 2013; Butts et al., 2015) and results in increased stress due to the feeling of being always "active" (Barley et al, 2011; Perlow, 2008). Furthermore, WFH often comes with a stigma (Leslie et al., 2012), as it makes parenting identities more public, often resulting in biased and discriminatory behaviors that have been shown to be particularly severe for women with families (Ladge et al. 2015).

A second critical feature of WFH contracts relates to the flexibility in where the work is accomplished. Extant literature identifies several benefits associated with this practice. First, WFH

contributes to reducing employees work stress (Raghuram and Wiesenfeld, 2004) and increases their perceived autonomy and independence (Kelliher and Anderson, 2008), organizational commitment (Hunton and Norman, 2010), job satisfaction (Virck et al., 2010), and, ultimately, job performance (Bloom et al., 2015; Gajendran et al., 2015; Gajendra and Harrison, 2007). Telecommuting is also associated with reduced work-family conflicts and it mitigates gender, racial, and religion based discriminations in the labor market (Chattopadhyay et al., 2008). On the other hand, recent studies identify robust associations between WFH arrangements and perceived loneliness and depression (Allen et al., 2015; Bloom et al., 2015; Callier, 2012), often resulting in employees feeling as excluded from the corporate life and thus resulting in less work engagement (Sardeshmuk et al., 2012). In turn, these negative consequences may result in aggravated work-family conflicts (Schierman and Young, 2010; Allen and Shockley, 2009; Kossek and Michel, 2011).

All in all, the social and psychological consequences of alternative working arrangements on employees' wellbeing and satisfaction are still unclear, and extant evidence insufficient to presume a positive - rather than a negative - wealth effect associated with their extensive use.

An alternative channel through which WFH arrangements may affect stock market performance is through their eventual effects on employees' productivity and corporate operational flexibility. As previously discussed, alternative work arrangements often include provisions allowing for working schedule flexibility, which has been shown to improve firms' ability to meet fluctuations in customers' demands (Wood, 2016). With respect to those alternative working arrangements providing employees with geographical flexibility, while forms of telecommuting contribute to increasing employees level of work intensity (Kelliher and Anderson, 2010), they

also result in reduced interaction between workers, which negatively affect knowledge sharing, and, thus, corporate innovation (Golden, 2007; Rockman and Pratt, 2015).

With respect to the direct financial consequences of firms' reliance on alternative work arrangements – namely, their effects on the cost of labor –, due to the unobservable nature of this economic dimension, extant literature has so far focused on case studies and industry or job specific surveys. Mas and Pallais (2017) use a discrete choice experiment in the employment process of a U.S. national call center to estimate employees' willingness to accept for alternative work arrangements relative to traditional office positions. Their results suggest that employees are willing to accept on average a 8% discount in exchange for a WFH arrangement, all else equal. However, the generalizability of these results to the average firm-employee relationship is far from obvious. While the focus on call center employees is indeed justified by data availability, more creative and skill-intensive tasks have been significantly more exposed to this technological and contractual transformation over the last five years (Hensvik, Le Barbanchon, Rathelot, 2020).³ Furthermore, WFH arrangements may impair the effectiveness of standardized compensation packages at motivating employees. Remote workers experience fewer opportunities for development and promotion (Kelliher and Anderson, 2008) and manager-subordinates relationships tend to be more conflictual when these alternative work arrangements are in place (Golden and Frome, 2011). Finally, telecommuters save hundreds of hours each year in commuting time, which allows families to reduce work-related costs, thus contributing to lowering employees' willingness to accept for a given job position as compared to the salary they would have asked for a standard work position (Barrero et al., 2020a; 2020b).

³ In particular “the top career fields offering this kind of remote work are medical/health, computer/IT, customer service, education/training, sales and accounting/finance. FlexJobs found that healthcare and computer/IT continued to be the most promising career fields for remote-friendly jobs.” (Forbes, January, 2020).

From a principle-agent perspective, WHF arrangements raise concerns due to their consequent increased degree of employees' self-management and to the lower observability of their effort levels. Indeed, corporations enacting these alternative work arrangements engage in increasingly advanced forms of employees surveillance and digital monitoring (Okhuysen et al., 2013; Watson et al., 2013), which still appears to be inadequate for employees working on tasks whose production outcome is intangible or unobservable in the short term (Konh, 1993).⁴ Furthermore, the consequent increased dependence on digital infrastructures raises material cybersecurity related concerns, which have been shown to result in lower returns to R&D investments (Lattanzio and Ma, 2020), lower debt capacity (Binfare`, 2020), and, ultimately, lower valuations and higher stock market volatility (Florakis, Louca, Michaely, and Weber, 2020).

Overall, extant literature does not provide sufficient evidence to allow one to univoquely predict the average value consequences of corporate reliance on alternative working arrangements, further emphasizing the initial motivation for this study.

2.2. Does the Stock Market Fully Price Alternative Working Arrangements?

Efficient markets capitalize rapidly any tangible and observable factors affecting firm value, thus precluding the emergence of any eventual excess returns. Yet, recent studies have shown systematic instances of underpricing for a wide array of firm characteristics and, in particular, for intangible assets. R&D investments (Lev, and Sougiannis, 1996; Chan, Lakonishok, and Sougiannis, 2001), advertising (Chan et al., 2001), corporate governance quality (i.e., Gompers, Ishii, and Metrick, 2003; Yermack, 2006; Bebchuk et al., 2009), and corporate engagements in Corporate Social Responsibility (i.e., Lattanzio and Litov, 2020; Serafeim, 2020; Borgers et al., 2013; Khan, Serafeim, Yoon, 2016) are just a few of the economic dimensions which have been

⁴ For example, monitoring call centers operators would be much easier than monitoring a designers, as performance measures are more difficult to be defined.

documented to allow for the construction of such outperforming portfolios. Building on these studies, we expect that focusing on alternative work arrangements may result in similar outcomes for two main motives. First, corporate reliance on alternative work arrangements is virtually unobservable and its economic consequences are mostly intangible and thus difficult to be incorporated into standardized valuation methodologies. Second, conflictual theoretical predictions and the lack of conclusive empirical evidence may inhibit the market's ability to fully capitalize the value consequences of alternative work arrangements. To test for these hypotheses, we next assess both stock market performance and earnings announcements characteristics of WFH corporations to shed lights on (1) whether the use of alternative work arrangements is beneficial to shareholders (2) while not being fully priced by the market due to its virtually unobservable and intangible nature.

3. Data and Summary Statistics

The main source of data for this study is represented by the list titled “100 Best Companies for Remote Working Jobs”. This ranking was first developed by FlexJobs.com in 2014 and it has been featured in the Forbes magazine each January ever since. This list of U.S. corporations is developed through an analysis of the remote job posting histories of more than 54,000 companies included the FlexJobs.com database aimed at identifying firms offering more “remote-friendly” positions than any others. Differently from other commonly studied lists such as the “100 Best Companies to Work For in America” published on a yearly basis on Fortune, firms do not apply to be considered for this list, thus mitigating self-selection concerns.

Since 2014, this list has been published on a yearly basis in Forbes in mid-January. Forbes' coverage provides this list a particularly high visibility, as it discloses information on several large publicly traded corporations at the same time. If the stock market fully incorporates any effect of

alternative work arrangements into stock prices, the list contents should be impounded by at least the start of February. Consequently, we construct and rebalance portfolios for the period 2014-2019 every year on February 1.⁵

Table 1 reports detailed information concerning the number of firms included in the list in year t with stock returns available on the Center for Research in Security Prices (CRSP) dataset, as well as the number of firms added to and drop from this list in a given year.

[Table 1 about here]

Consistent with our prior, firms' reliance on alternative work arrangements is reasonably persistent over time, but not permanent. Similar to other lists capturing other intangibles such as employees' satisfaction (Levering, Moskowitz, and Katz, 1984, Edmans, 2011), approximately one third of publicly traded firms drop off the list each year. Despite the short available time-series, such a turnover rate allows the number of unique firms included in our sample (98) to be not significantly far-off those used in other similar abnormal return studies (e.g., 104 unique firms in Yermack, 2006; 193 in Hong and Kacpercyk, 2009; and 216 in Edmans, 2011).

Using the resulting sample, we construct and rebalance both equal and value weighted portfolios every calendar year on February 1. If a firm included in the sample is initially private in year t but goes public before the list is published in year $t+1$, we follow Edmans (2011) and include it from the first full month following its IPO.

Table 2 reports summary statistics for the 46 firms included in the "100 Best Companies for Remote Working Jobs" list published in January, 2020, as observed at the end of fiscal year 2019. Available firms are mostly large-cap public enterprises, with a mean market value of about

⁵ In the first part of this paper, we exclude the calendar year 2020 from our analyses to avoid results to be driven by the unique trends and events occurred during the Global SAR-COV2 pandemics. However, section 6 explicitly investigates eventual differences between the pandemic period and the pre-COVID-19 age.

\$18.2bn, feature relatively low leverage levels, and more than 75% of them pay dividends. From an industry distribution perspective, no clear pattern emerges. The most common 2-digits SIC industries are Business Services (9) and Engineering & Management Services (4), followed by Educational Services (1), Hotel & Other Lodging Places (1), Real Estate (1), Insurance Carriers (3), Depository Institutions (1), Miscellaneous Retail (2), Instruments & Related Products (2), Printing & Publishing (1), Chemical & Allied Products (2), Industry Machinery & Equipment (2), and Transportation Equipment (1). Such a variation echoes recent reports documenting that remote working is diffused across industries and job positions, often involving high skill employees assigned to innovative and human capital intensive tasks.

[Table 2 About Here]

The use of this list provides us with several advantages. First, firms' reliance on alternative work arrangements is difficult to measure. Extant studies often rely upon industry (or job) specific surveys, which might suffer from reporting errors (Dingel and Neiman, 2020; Hensvik et al., 2020; Koren and Peto, 2020; Pagano et al., 2020). Conversely, the used ranking mitigates these concerns by providing an objective and data-driven measure of corporate reliance upon WFH arrangements. Second, this list allows to study if and how the market price alternative work arrangements since it is publicly available and its construction follows a transparent process, fostering a perception of accuracy. This list is indeed easily tradable and it allows to construct unique portfolios capturing an otherwise unobservable dimensions of a corporation's organizational structure (Edmans, 2011).

4. Empirical Analysis

To assess if any eventual outperformance of the corporations included in the "100 Best Companies for Remote Working Jobs" can be univoquely attributed to their reliance upon

alternative work arrangements, rather than to other known market anomalies, we estimate portfolio regressions controlling for the four Carhart (1997) risk factors, as indicated in Model (1):

$$R_t = \alpha + \beta_{MKT}MKT_t + \beta_{HML}HML_t + \beta_{SMB}SMB_t + \beta_{MOM}MOM_t + \varepsilon_t \quad (1)$$

Where R_t is the return on the constructed portfolio in month t in excess of a selected benchmark. Similarly to Edmans (2011) we use three different benchmarks. First, the risk-free rate provided on the Ken French website.⁶ Second, the returns of the S&P500 index. Third, an industry-matched portfolio based on the Fama-French 49 industry classification; this third benchmark allows us to obtain particularly prudential estimates as it mitigates concerns related to the possibility that the eventually identified outperformance originates from industry specific shocks or characteristics not properly captured by the four Carhart (1997) systematic factors. While asset pricing theory does not predict that expected returns should be systematically different across industries, industry and firm specific factors may indeed still have explanatory power even when appropriately controlling for eventual covariances (Daniel and Titman, 1997), thus justifying such a conservative approach.⁷ α is an intercept representing the abnormal risk-adjusted returns of the portfolio. MKT_t , HML_t , SMB_t , and MOM_t are the returns on the market, value, size and momentum factors, respectively. The factors are obtained from the Ken French website. Following Edmans (2011), standard errors are robust to heteroskedasticity and serial correlation (Newey and West, 1987).

Table 3 reports the resulting estimates. The constructed portfolios generate significant excess returns over all the proposed benchmarks and both in their value weighted and equal weighted compositions. For value-weighted returns, the monthly alpha is 0.6% using the risk-free

⁶ https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

⁷ In this sense, such an industry adjustment is particularly important to absorb the resilience effect due to the eventual industry-wide (rather than firm-specific) reliance on alternative working arrangements documented in Pagano, Wagner, and Zechner (2020), Dingel and Neiman (2020) and Koren and Peto (2020).

rate as benchmark, 0.5% over the S&P500, and 1.2% over the industry-matched benchmark. The estimated alphas are comparable though slightly smaller for equal weighted portfolios.

[Table 3 about here]

While tests reported in Table 3 documents that WFH firms' outperformance is not due to a covariance effect with other Carhart (1997) risk factors, nor to industry specific effects, it is possible that a few outliers might drive the identified relation due to the limited available sample size. In order to test for this possibility, we follow Edmans (2011) and winsorize at the 5% (or 10%) level the highest and lowest returns of the listed firms over the studied period. As reported in Table 4, results are robust to winsorization. In particular, the economic magnitude of the estimated alphas further increases, suggesting that eventual outliers contribute to deflating, rather than inflating the identified outperformance. We can thus confidently conclude that the documented association is not due to extreme returns exhibited by a handful of firms included in our sample.

[Table 4 about here]

An additional concern is related to the possibility that the identified alphas might stem from their correlation with firm specific characteristics which are not fully captured by the Carhart (1997) systematic factors. To mitigate this concern, we adopt a regression approach to control for a wider array of economic dimension as compared to what a portfolio approach would have allowed us to do. In particular, we rely upon a Fama-McBeth (1973) approach to estimate the following regression model:

$$R_{i,t} = \delta_0 + \delta_1 WFH_{i,t} + \delta_2 Z_{i,t} + \vartheta_{i,t} \quad (2)$$

Where $R_{i,t}$ is the returns on stock i in month t , either raw (Column (1) and Column (2) or industry adjusted (Column (3) and Column (4)). $WFH_{i,t}$ is a dummy variable set equal to 1 if firm

i was included in the list in year t , 0 otherwise. $Z_{i,t}$ is a matrix of firm level controls for which detailed definitions are provided in Appendix A.1. Controls include size, measured as the natural logarithm of total assets;⁸ log sales, defined as the natural logarithm of total revenues; leverage, defined as the ratio of total debt to common equity, dividend payer status; a dummy that equals 1 if firm i is a dividend payer in year t , 0 otherwise; missing R&D, a dummy identifying all firms for which the R&D item is missing in Compustat; R&D to sales, defined as the ratio R&D expenditures to total revenues; and the stock market controls included in Edmans (2011) capturing the natural logarithm of the cumulative returns computed over months $t-3$ through $t-2$ (Ret2-3), $t-6$ through $t-4$ (Ret4-6) and $t-12$ through $t-7$ (Ret7-12); the natural logarithm of the dollar volumes of as measured in month $t-2$ (Volumes); and the natural logarithm of the stock price as observed at the end of month $t-2$ (Log Stock Price). As documented in Table 5, for both unadjusted and industry-adjusted returns we show that the list inclusion is associated with an additional 30-70 basis points monthly outperformance. These results further confirm that the listed firms' excess returns do not result from eventual correlations with other firm specific characteristics.

[Table 5 about here]

An additional concern is related to the possibility that the identified outperformance actually stems from eventual reputational gains associated with a corporation having its name covered in a major U.S. economic magazine, rather than from its reliance on alternative work arrangements. In order to mitigate this issue, we analyze short-term stock market reactions to the public release of the list on Forbes. Table 6, Panel A document that firms' inclusion in the list in a given year is indeed associated with a positive stock market reaction. On the one hand, this result is reassuring, as it confirms the relevance of the studied ranking. On the other hand, however, this

⁸ Results are robust to the measuring firm size as the natural logarithm of the firm's market capitalization.

finding is also consistent with the discussed alternative hypothesis. To disentangle these two alternative – though not mutually exclusive - interpretations, we analyze short term returns around the publishing date for firms included for the first time in the list (Panel B) and for those dropped from the ranking (Panel C). If firms included in the sample experience positive abnormal returns while firms being dropped from the list experience negative abnormal returns, then we would have to conclude that the captured effects are at least partially due to a reputational shock. Indeed, the removal of a firm from the list should be information neutral, as it does not imply that the dropped corporation has stopped using alternative work arrangements; consequently, a negative response to being dropped by the sample would suggest that investors are discounting eventual reputational effects that the inclusion in the list caused in the first place.

To run these tests, we estimate cumulative abnormal returns are based on a Fama-French 4 Factors model estimated over the period from -255 to -46 days. We require a stock to have at least three valid trading days over the estimation period to be included in the sample. The model is adjusted following the Scholes-Williams methodology. All specifications include robust standard errors. As documented in Table 6, Panel B and Panel C, our results document that while the positive reaction to being included in this ranking is concentrated on firms making the cut for the very first time, no evidence of negative abnormal performance for corporations dropped from the list can be identified for any of the studied windows. The lack of abnormal returns suggests that while the inclusion in this ranking provides investors with material information concerning a firms' reliance upon WFH policies, which are perceived as value enhancing, the removal from the list is information neutral, consistent with investors (1) recognizing that the dropped firms are likely to still be engaging in this policy and (2) not discounting the eventual reputational effect that the inclusion in the list might have generated in the first place.

[Table 6 about here]

Next, we address the possibility that the identified effect might actually stem from the eventual overlapping between the “100 Best Companies for Remote Working Jobs” list and the “100 Best Companies to Work For in America” list (Levering, Moskowitz, and Katz, 1984, Edmans, 2011). If the two rankings feature material similarities, the identified performance might indeed emerge from the human capital channel discussed in Edmans (2011) rather than from corporate reliance on alternative work arrangements. To address this issue, we first observe that only 20 firm-years observations (8 unique firms) are common to both lists.⁹ Second, we replicate the portfolio regression analyses reported in Table 3 after excluding these 8 firms from the constructed portfolios. As documented in Table 7, results remain virtually unchanged, confirming that our tests cannot be interpreted as unintended replications of Edmans (2011).

[Table 7 about here]

All in all, our findings confirm the existence of a robust association between firms’ reliance upon alternative work arrangements and stock market performance. Next, we investigate how such an effect materializes in the first place.

5. Earnings Announcements and Corporate Reliance on Alternative Work Arrangements

We hypothesize that alternative work arrangements such as WHF practices might be beneficial to firm value through its effects on employees’ satisfaction and productivity, and that this effect is not immediately capitalized by the market because it is intangible (Edmans, 2011) and virtually unobservable (Bloom, 2015). If this is the case, we should observe the identified outperformance to emerge when the effects of a firms’ reliance on alternative work arrangements materialize in tangible outcomes, namely in superior accounting performance. To test for this

⁹ I am thankful to Alex Edmans for sharing his data through his personal website: <https://alexedmans.com/data/>. A detailed description of the datasets is reported in Edmans (2011) and Edmans (2012).

hypothesis, we follow Core, Guay, and Rusticus (2006), Easterwood and Nutt (1999), Lim (2001), Teoh and Wong (2002), Giroud and Mueller (2011), and Edmans (2011) to study firms' earnings announcement surprise to assess how their unexpected component might affect WFH firms stock market returns. In particular, we estimate the following regression model:

$$Earnings\ Surprise_{i,t} = \beta_0 + \beta_1 WFH_{i,t} + \beta_2 Z_{i,t-1} + \mu_{i,t} \quad (2)$$

Similarly to Core, Guay, and Rusticus (2006), Giroud and Mueller (2011), and Edmans (2011), Earnings Surprise is the one year earnings surprise defined as the realized earnings per share (EPS) at the fiscal year ending t minus the median Institutional Brokers' Estimate System (I/B/E/S) analysts forecast, deflated by the stock price at fiscal year-end t.¹⁰ The I/B/E/S consensus estimate is taken eight months before the end of the forecast period. Observations with a forecast error larger than 10% of the firm's stock price are dropped from the sample. $WFH_{i,t}$ is a dummy variable identifying all firms included in the list for which data are available. $Z_{i,t-1}$ is a matrix of firm-level controls including Tobin's Q and firm size as observed at the end of the fiscal year t-1. Furthermore, we augment this specification by including firm and fiscal year fixed effects. As shown in Table 8, the one-year earnings surprises are systematically greater for the listed firms, with the difference being statistically significant at the 1% level of confidence. Results are robust the controlling for Tobin's Q and size, both separately and in the same specification, documenting that a size effect is insufficient to explain the identified results. These findings provide preliminary support for our initial hypothesis, documenting that firms' relying on alternative work arrangements achieve superior accounting performance than their peers adopting more standardized labor contracts, and that analysts systematically fail at identifying such a performance effect.

¹⁰ Results are robust to the use of a 2-years and a 5-years based measure of earnings surprise.

[Table 8 About here]

To further investigate our hypothesis, we examine firms' stock price reaction to earnings surprises in Table 9. In particular, we examine all earnings announcement dates from April 2014 to December 2019 from I/B/E/S and calculate three-day, five-days, and seven-days returns in excess of a market model. As common practice, we estimate the market model using up to 255 trading days, ending 46 days before the event date. By looking at the cross-section of returns, we confirm that the listed firms experience average CARs significantly higher than what estimated for similar firms. The effect is robust to controlling for size and Tobin's Q, as well as for year and firm fixed effects. All in all, these short-term event studies allow us to address concerns related to the possibility that the identified outperformance might stem from a non-included or unknown systematic risk factor, shedding light on one of the channel through which corporate reliance on alternative working arrangements induces material accounting and stock market performance implications.

[Table 9 about here]

6. Alternative work arrangements and Resilience to the COVID19 Pandemics

All the previous tests have so far ignored the period following the global spreading of the SARS-CoV-2 virus to avoid such an unprecedented shock to severely influence our estimates. The extreme stock market returns observed in 2020 would have indeed been a major cause of concern in our setting, as data constraints have resulted in the availability of a relatively short time-series. Yet, we recognize that the pandemic has significantly accelerated the adoption of WFH policies in the United States, reshaping labor market dynamics and employees' preferences. In this section, we investigate if and how the pandemic shock has affected the relative stock market performance of firms adopting alternative work arrangements. As we previously discussed, corporate reliance

on alternative work arrangements may indeed contribute to increasing corporate resilience to black swan events by increasing their operational flexibility (Pagano, Wagner, and Zechner, 2020; Dingel and Neiman, 2020; and Koren and Peto, 2020). To operationalize our tests, we replicate the portfolio regressions reported in Table 3 after augmenting the specification with a SARS-CoV-2 period dummy capturing the differential excess returns experienced by firms included in the “100 Best Companies for Remote Working Jobs” published in January, 2020, over the period from February to October, 2020.¹¹

[Table 10 about here]

As reported in Table 10, the estimated portfolio regressions confirm the previously identified excess returns for the constructed portfolios over the period from February, 2014, to January, 2020. Importantly, the documented outperformance further inflates during the SARS-CoV-2 period, providing initial support for the hypothesis that the extensive use of alternative work arrangements over the pre-pandemic period has provided these corporations with a higher degree of operational flexibility, which, in turn, has resulted in higher resilience to the occurrence of such a black swan event (Pagano, Wagner, and Zechner, 2020).

7. Conclusions

This study documents for the first time that firms’ reliance on alternative work arrangements is associated with superior long-horizon stock market returns beyond what can be explained by other systematic risk factors, industry shocks, and a wide array of observable firm-level characteristics. We interpret these results as evidence that the market fails at fully valuing the financial and economic consequences associated to the use of these increasingly diffuse labor contracts, even in those cases in which their use is certified by publicly available and reliable data.

¹¹ Assuming the pandemic period to cover the U.S. lockdown period from February 2020 to March 2020, exclusively, results in similar results.

Consistent with what observed for other intangible or unobservable economic dimensions, corporate reliance on alternative work arrangements is indeed reflected in stock prices only when they subsequent result in tangible outcomes, ultimately becoming observable through events such as earnings announcements.

We further document that the outperformance of firms using extensively alternative work arrangements has increased during the current SARS-CoV-2 pandemic. This finding is consistent with the hypothesis that WFH arrangements provide corporations with a higher degree of operational flexibility, which ultimately results in improved resilience to black swan events. Consequently, screening firms along this previously unexplored dimension may improve investment returns and resilience to long-tail risk.

Appendix A.1.

Variables definitions

| Variable Name | Definition |
|-----------------------|--|
| Dividend Payer | A dummy variable set equal to 1 if the firm pays dividend or engages in shares repurchases in year t. |
| Log Sales | Natural log of total revenues (sale). |
| Leverage | Total debt (dltt + dlc) divided by total assets (at). |
| Market Capitalization | Natural logarithm of market capitalization (prcc_f*csho). |
| Missing R&D | A dummy variable set equal to 1 if R&D investments (xrd) is missing in Compustat. |
| R&D to Sales | The ratio R&D investments (xrd) to total revenues (sale). Missing R&D investments in Compustat are set to 0. |
| Size | Natural logarithm of total assets (at). |
| Tobin's Q | Market value of assets (at - book equity + market equity (prcc_f*csho)) divided by the book value of assets (at). Book equity and this measure, in general, follow Fama French (1992). |

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Table 1

Summary statistics.

The second column of this table details the number of “100 Best Companies for Remote Working” with returns available on at least one month between the publication of the list of that calendar year, and the subsequent list. The third column reports the number of new public companies added to the “100 Best Companies with Remote Working Jobs” list of that year. The fourth column contains the number of companies on the previous “100 Best Companies for Remote Working Jobs” list which no longer feature in the current list or are no longer public.

| Year of List | 100 Best Companies for Remote Working Jobs | Added | Dropped |
|--------------|--|-------|---------|
| 2014 | 35 | | |
| 2015 | 37 | 13 | 11 |
| 2016 | 38 | 12 | 11 |
| 2017 | 41 | 11 | 8 |
| 2018 | 46 | 15 | 10 |
| 2019 | 48 | 14 | 12 |
| 2020 | 46 | 10 | 12 |

Table 2

"100 Best Companies For Remote Working Jobs" in 2020.

Summary characteristics for the 46 companies included in the "100 Best Companies For Remote Jobs" list published in January 2020. Data are from CRSP and Compustat, as observed at the end of fiscal year 2019. Variable definitions are provided in Table A.I.

| Year of List | Mean | St. Dev. | Min | Max |
|-----------------------|---------|----------|---------|---------|
| Size | 9.7999 | 1.9664 | 6.7088 | 14.8040 |
| Log Sales | 9.5144 | 1.7056 | 6.4431 | 12.5441 |
| Leverage | 0.2642 | 0.1283 | 0.0276 | 0.6126 |
| R&D to Sales | 0.0413 | 0.0679 | 0.0000 | 0.2162 |
| Dividend Payer | 0.7619 | 0.4310 | 0.0000 | 1.0000 |
| Market Capitalization | 16.7176 | 1.8515 | 13.5835 | 20.5539 |

Table 3

Risk-adjusted returns regressions.

This table documents monthly regressions of portfolio returns of a portfolio including the "100 Best Company For Remote Working Jobs" on the four Carhart (1997) factors, MKT, HML, SMB, and MOM. The dependent variable is the monthly portfolio return less either the S&P500 returns, the risk-free rate, or an industry-matched portfolio returns. The period covered in these analyses is February 2014 – January 2020. Panel A contains equal-weighted returns and Panel B reported value-weighted returns. The alpha is the excess risk-adjusted return. Standard deviations are in parentheses. The sample is January 2014 to December 2019. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| | S&P500 | Risk-Free | Industry |
|---------------------------------|---------------------|---------------------|----------------------|
| Equal Weighted Portfolio | | | |
| Alpha | -0.001 (0.001) | 0.006** (0.002) | 0.005*** (0.002) |
| Market Factor | 0.010*** (0.001) | 1.010*** (0.001) | 0.000 (0.000) |
| SMB | 0.001 (0.001) | 0.002 (0.001) | -0.007*** (0.001) |
| HML | -0.002 (0.002) | -0.002 (0.002) | -0.002 (0.002) |
| Momentum Factor | -0.001 (0.001) | -0.000 (0.001) | 0.001 (0.001) |
| Value Weighted Portfolio | | | |
| Alpha | 0.005** (0.002) | 0.006* (0.003) | 0.012*** (0.002) |
| Market Factor | 0.010*** (0.001) | 1.012*** (0.001) | 0.002* (0.001) |
| SMB | 0.001 (0.001) | -0.002 (0.002) | -0.011*** (0.002) |
| HML | -0.002 (0.002) | -0.002 (0.002) | -0.002 (0.002) |
| Momentum Factor | -0.001 (0.001) | 0.003* (0.002) | 0.004* (0.002) |
| Number of Observations | 72 | 72 | 72 |

Table 4

Risk-adjusted returns - Winsorized portfolios.

This table documents monthly regressions of portfolio returns of a portfolio including the "100 Best Company to Work From Home For" on the four Carhart (1997) factors, MKT, HML, SMB, and MOM. The dependent variable is the portfolio returns (winsorized at the x% and 100%-x% levels across the sample period) less either the S&P500 returns, the risk-free rate, or an industry-matched portfolio returns. Panel A contains equal-weighted returns and Panel B reported value-weighted returns. The alpha is the excess risk-adjusted return. Standard deviations are in parentheses. The sample is February 2014 to January 2020. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| | x=5% | | | x=10% | | |
|---------------------------------|---------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| | S&P500 | Risk-Free | Industry | S&P500 | Risk-Free | Industry |
| Equal Weighted Portfolio | | | | | | |
| Alpha | -0.001 (0.002) | 0.006** (0.002) | 0.005*** (0.002) | 0.010*** (0.001) | 0.010*** (0.001) | 0.006*** (0.002) |
| Value Weighted Portfolio | | | | | | |
| Alpha | 0.012*** (0.002) | 0.005* (0.003) | 0.012*** (0.002) | 0.012*** (0.001) | 0.012*** (0.001) | 0.002* (0.001) |
| Number of Observations | 72 | 72 | 72 | 72 | 72 | 72 |

Table 5

Characteristics regressions.

This table documents the results of monthly regressions of individual stock returns (Raw Returns in Column (1) and Column (2); Industry Adjusted Returns in Column (3) and Column (4)) on a dummy variable for whether the firm was in the most recent list of the "100 Best Companies for Remote Working Jobs " (WFH) and a set of firms specific characteristics including: firm size, log sales, leverage, a dividend payer status indicator, a dummy identifying missing R&D in Compustat, R&D to Sales, the natural logarithm of the cumulative returns over months t-3 to t-2 (Ret2-3), t-6 through t-4 (Ret4-6), and t-12 through t-7 (Ret7-12), the logarithm of the dollar volume trading in month t-2 (Volumes) and the natural logarithm of the stock price as at the end of the month t-2. All variables are defined in Appendix A.I. Standard Errors reported in parenthesis are heteroskedasticity robust. The sample period is from February 2014 to January 2020. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| | (1) | (2) | (3) | (4) |
|------------------------|---------------------|----------------------|---------------------------|----------------------|
| | Raw Returns | | Industry Adjusted Returns | |
| WFH | 0.005*** (0.002) | 0.003* (0.002) | 0.007*** (0.002) | 0.005** (0.002) |
| Size | | 0.001*** (0.000) | | 0.001*** (0.000) |
| Log Sales | | 0.000 (0.000) | | -0.000 (0.000) |
| Leverage | | -0.007*** (0.001) | | -0.009*** (0.001) |
| Dividend Payer Status | | -0.001* (0.001) | | -0.000 (0.001) |
| Missing R&D | | -0.002*** (0.001) | | -0.003*** (0.001) |
| R&D to Sales | | -0.000 (0.000) | | -0.000 (0.000) |
| Ret2-3 | | -0.002 (0.003) | | -0.000 (0.004) |
| Ret4-6 | | -0.003* (0.002) | | -0.001 (0.002) |
| Ret7-12 | | -0.001 (0.001) | | -0.004*** (0.001) |
| Volumes | | 0.000 (0.000) | | 0.000 (0.000) |
| Log Stock Price | | -0.000*** (0.000) | | -0.000*** (0.000) |
| # of Months | 72 | 72 | 72 | 72 |
| Number of Observations | 280884 | 280884 | 280884 | 280884 |

Table 6

Short-term reaction to the release of the “100 Best Companies for Remote Jobs” list. This table documents the estimates for a short-term event study based on the 100 Best Companies for Remote Jobs list on Forbes and FlexJob.com. The cumulative abnormal returns are based on a Fama-French 4 Factors model estimated over the period -255 to -46 days. The model requires a stock to experience at least three valid trading days over the estimation period to be included in the sample. The model is adjusted following the Scholes-Williams methodology. The period covered in these analyses is February 2014 – January 2020. Panel A reports the analyses including all firms for which sufficient returns are available to estimate the model. Panel B includes all firms that are added to the list in year t . Panel C considers firms that are dropped from the list in year t . All standard errors are robust to heteroskedasticity. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| Panel A: All firms included in the list | | |
|---|----------|---------|
| Window | CAR | P-Value |
| (-1 ; 1) | 0.21%* | 0.054 |
| (-2 ; 2) | 0.27%* | 0.063 |
| (-3 ; 3) | 0.3%* | 0.066 |
| (-5 ; 5) | 0.43%* | 0.057 |
| (-10 ; 10) | 0.64%* | 0.072 |
| Panel B: Firms included in the list for the first time | | |
| Window | CAR | P-Value |
| (-1 ; 1) | 0.23%* | 0.082 |
| (-2 ; 2) | 0.47%** | 0.016 |
| (-3 ; 3) | 0.49%*** | 0.01 |
| (-5 ; 5) | 0.07% | 0.365 |
| (-10 ; 10) | 0.84%** | 0.064 |
| Panel C: Firms dropped from the list | | |
| Window | CAR | P-Value |
| (-1 ; 1) | -0.07% | 0.34 |
| (-2 ; 2) | -0.21% | 0.398 |
| (-3 ; 3) | -0.13% | 0.338 |
| (-5 ; 5) | 0.51% | 0.116 |
| (-10 ; 10) | 0.27% | 0.281 |

Table 7

Risk-Adjusted Returns Regressions Ex-“100 Best Companies to Work For in America”. This table replicates the monthly regressions of portfolio returns reported in Table 3 after excluding the 8 companies that were also featured at least for one time over the period 2014-2019 in the “100 Best Companies to Work For in America” list. Regressions are estimated based using the four Carhart (1997) factors, MKT, HML, SMB, and MOM. The dependent variable is the monthly portfolio return less either the S&P500 returns, the risk-free rate, or an industry-matched portfolio returns. The period covered in these analyses is February 2014 – January 2020. Panel A contains equal-weighted returns and Panel B reported value-weighted returns. The alpha is the excess risk-adjusted return. Standard deviations are in parentheses. The sample is January 2014 to December 2019. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| | S&P500 | Risk-Free | Industry |
|---------------------------------|--------------------|--------------------|---------------------|
| Equal Weighted Portfolio | | | |
| Alpha | 0.000 (0.001) | 0.006** (0.001) | 0.005*** (0.002) |
| Value Weighted Portfolio | | | |
| Alpha | 0.004** (0.002) | 0.006** (0.002) | 0.010*** (0.003) |
| 4-Factors Loadings | Yes | Yes | Yes |
| Number of Observations | 72 | 72 | 72 |

Table 8

Earnings surprises.

This table documents the results regressions of earnings surprises on a dummy for whether the firm was in the most recent list of the "100 Best Companies for Remote Working Jobs" (WFH) and a set of firm specific characteristics including Tobin's Q and firm size, as observed at the previous year-end. The 1-year earnings surprises are calculated as the actual EPS minus the I/B/E/S median analyst forecast published 8 months prior to end of the forecast period, scaled by the stock price. All regressions include year and firm fixed effects and a constant term. Standard errors reported in parenthesis are heteroskedasticity robust. The sample period is from February, 2014 to January, 2020. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| | (1) | (2) | (3) |
|----------------|--------------------------|---------------------|---------------------|
| | 1-Year Earnings Surprise | | |
| WFH | 0.003*** (0.001) | 0.003*** (0.001) | 0.002** (0.001) |
| Tobin's Q | | -0.000 (0.000) | 0.000 (0.000) |
| Size | | | 0.001*** (0.000) |
| Constant | Yes | Yes | Yes |
| Firm & Year FE | Yes | Yes | Yes |
| # Obs | 12838 | 12838 | 12838 |

Table 9

Earnings announcement returns.

This table documents cross-sectional analyses of short-term abnormal returns to yearly earnings announcements. Panel A reports results for the window (-1;1). Panel B reports results for the window (-2;2). Panel C reports result for the window (-3;3). Abnormal returns are calculated above a market model in which the coefficients are estimated over a 255-day period ending 46 days before the earnings announcement. The regression includes a dummy for whether the firm was in the most recent list of the "100 Best Companies For Remote Working Jobs " (WFH) and a set of firm specific characteristics including Tobin's Q and firm size and calculated as at the previous year-end. Regressions include year and firm fixed effects and a constant term. Standard errors reported in parenthesis and are heteroskedasticity robust. The sample period is from February, 2014 to January 2020. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| Panel A: 3-days CAR | | | |
|----------------------------|--------------------|----------------------|----------------------|
| | (1) | (2) | (3) |
| | CAR(-1;1) | | |
| WFH | 0.017** (0.008) | 0.020** (0.009) | 0.020** (0.009) |
| Tobin's Q | | -0.000*** (0.000) | -0.000*** (0.000) |
| Size | | | -0.018*** (0.004) |
| Constant | Yes | Yes | Yes |
| Firm & Year FE | Yes | Yes | Yes |
| # Obs | 12068 | 12068 | 12068 |
| Panel B: 5-days CAR | | | |
| | (1) | (2) | (3) |
| | CAR(-2;2) | | |
| WFH | 0.019** (0.009) | 0.021** (0.010) | 0.020** (0.009) |
| Tobin's Q | | -0.000 (0.000) | -0.000*** (0.000) |
| Size | | | -0.018*** (0.004) |
| Constant | Yes | Yes | Yes |
| Firm & Year FE | Yes | Yes | Yes |
| # Obs | 12068 | 12068 | 12068 |

| Panel C: 7-days CAR | | | |
|----------------------------|--------------------|----------------------|----------------------|
| | (1) | (2) | (3) |
| | CAR(-3;3) | | |
| WFH | 0.019** (0.009) | 0.022** (0.010) | 0.022** (0.010) |
| Tobin's Q | | -0.000*** (0.000) | -0.000*** (0.000) |
| Size | | | -0.018*** (0.004) |
| Constant | Yes | Yes | Yes |
| Firm & Year FE | Yes | Yes | Yes |
| # Obs | 12068 | 12068 | 12068 |

Table 10

Risk-adjusted returns regressions – COVID19 period.

This table documents monthly regressions of portfolio returns of a portfolio including the "100 Best Company for Remote Working Jobs " on the four Carhart (1997) factors, MKT, HML, SMB, and MOM. The dependent variable is the portfolio return less either the S&P500 returns, the risk-free rate, or an industry-matched portfolio returns. Panel A contains equal-weighted returns and Panel B reports value-weighted returns. The alpha is the excess risk-adjusted return over the selected benchmark. Standard deviations are in parentheses and are robust to heteroskedasticity. The sample covers the period from February, 2014 to October, 2020. The SARS-CoV-2 period includes the period from February 2020 to October 2020. *, **, *** indicate statistical significance at the 10%, 5%, and 1%, respectively.

| | S&P500 | Risk-Free | Industry |
|---------------------------------|-------------------|---------------------|---------------------|
| Equal Weighted Portfolio | | | |
| Alpha | 0.003* (0.001) | 0.005** (0.002) | 0.049*** (0.006) |
| COVID19 – Δ Alpha | 0.025 (0.016) | 0.028* (0.016) | 0.208* (0.090) |
| Value Weighted Portfolio | | | |
| Alpha | 0.004* (0.003) | 0.010*** (0.002) | 0.051*** (0.006) |
| COVID19 – Δ Alpha | 0.033* (0.018) | 0.036* (0.019) | 0.216* (0.083) |
| Model | FF4 | FF4 | FF4 |
| Number of Observations | 81 | 81 | 81 |