# Covid-19 Wage Subsidy Disclosure and Firms' Contemporaneous Dividend Payouts\*

Hong Fan – St. Mary's University, Halifax <u>hong.fan@smu.ca</u>

Amin Mawani – York University, Toronto amawani@schulich.yorku.ca

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# Abstract

The Canada Emergency Wage Subsidy (CEWS) was designed as a bailout for employees who had been sidelined from employment during Covid-19. However, the eligibility rules for the subsidy suggest that it may have been more of a business subsidy and not a wage subsidy for jobs that would otherwise have been lost. CEWS recipients did not have to demonstrate the need for cash, and therefore the subsidy could flow through to higher dividend payouts to shareholders.

This paper examines characteristics of publicly-listed firms that voluntarily disclosed the wage subsidy they received and whether they were associated with changes in contemporaneous dividend payouts. We hypothesize and show that firms may have been reluctant to disclose their CEWS if they increased their dividend payouts in the same year. This may reflect firms' reluctance to disclose subsidies being diverted to shareholders in the form of higher dividends. The reluctance to disclose CEWS is higher for dividend-increasing firms that have lower cash holdings, report losses, report lower earnings, or engage in downwards earnings management. Our results hold under endogeneity tests using 2SLS.

Keywords: Wage Subsidies, Corporate Disclosure, COVID-19 pandemic.

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## 1. Introduction

The Canada Emergency Wage Subsidy (CEWS) was rolled out by the Canadian federal government as a subsidy for businesses experiencing a prespecified decline in monthly revenues during the Covid-19 pandemic. Businesses that retained their employees could apply for and receive CEWS on behalf of their employees. Businesses were strictly intended to be the conduit for the employees, and CEWS was only available for employees retained. While there was no requirement to renounce layoffs, firms did not receive CEWS for employees that were not retained.

The government intended the subsidy to flow through to the employees to ensure they had sufficient cash flows during the Covid-19 lockdown when supply was curtailed for public health reasons. CEWS was one of several programs intended to help 'freeze' the economy and businesses until the health shock had been contained, and then allow the economy and businesses to resume their normal activities. It was designed to prevent job and income losses while the pandemic prevailed.

Some recipients of CEWS disclosed this subsidy in their annual reports and / or MD&A reports while others did not. Of those that did disclose receipt of CEWS, some disclosed the specific amount of CEWS subsidy received while others simply reported that they received a CEWS subsidy without disclosing the amount received. Variations in the reporting of CEWS subsidy confirms that there are no accounting regulations and disclosure norms regarding whether and how to report it. If the subsidy amount did not exceed the accounting materiality threshold, firms may have not been obliged to disclose such subsidies in their annual reports.

Similar to other voluntary disclosures, firms have incentives to not report bad news or to seek economic rents by stealth (Roychowdhury & Sletten, 2012). While applying for CEWS on

behalf of employees can be considered both a fiscally and socially responsible business practice, applying for CEWS when the firm does not need the operating cash flows in a given year may be viewed as a questionable practice to the community stakeholders. The financial press published many articles pointing out how CEWS recipients were paying out higher dividends (Ferreira, 2020; Welsh and McLean, 2020). To avoid such publicity, firms for which the CEWS subsidy was not necessary from an annual cash flow perspective – and which could be redirected to pay higher dividends in the year of CEWS receipt – may be reluctant to disclose their CEWS subsidy.

Our focus on firms that increased their dividend payouts during the pandemic years is in sharp contrast to Alves, Gietzmann and Jorgensen (2021) who document that many U.S. firms suspended their dividend payouts during the early stages of the pandemic with approval from shareholders and executives agreeing to "sharing the pain."

The CEWS legislation made it clear at the onset that the Canada Revenue Agency (CRA) would disclose the identity of all CEWS recipients.<sup>1</sup> In December 2020, CRA set up a registry<sup>2</sup> of businesses that received CEWS searchable by company name. However, this registry did not include the amount of the subsidies given to the recipients. This study on firms' disclosure practices therefore relies on a manual search of annual reports and MD&A statements to establish whether those on the CEWS registry disclosed any subsidies received in their annual reports.

This paper examines the determinants of firms' decision to disclose the receipt and / or the amounts of CEWS subsidies in their annual reports and / or MD&A. After summarizing anecdotal evidence from the financial press and surveying the academic literature, we hypothesize and find that firms that increased their dividend payouts (compared to the previous year) in the year they

<sup>&</sup>lt;sup>1</sup> Subsection 241(3.5) of Canadian Income Tax Act.

<sup>&</sup>lt;sup>2</sup> CEWS registry at <u>https://apps.cra-arc.gc.ca/ebci/hacc/cews/srch/pub/dsplyBscSrch?request\_locale=en</u>

received wage subsidies were more reluctant to disclose their CEWS subsidy – perhaps to conceal the source of their higher payouts. Our robustness tests show that this negative association between the disclosure of CEWS and dividend growth is more pronounced for dividend payers that are less expected to increase dividends – e.g., firms with low cash holdings, firms with losses or lower earnings (compared to previous year), or firms engaged in downward earnings management.

Our study makes several theoretical and practical contributions. To the best of our knowledge, this is the first study to examine firms' incentives to disclose government wage subsidies received during the Covid-19 pandemic. Governments across the globe paid out large amounts to firms during the pandemic, with limited transparency of who received these funds. This lack of transparency is significant given that CEWS constituted the largest single spending initiative in the history of the Canadian federal government (Brethour, Cardoso, Milstead & Subramaniam, 2021). Lack of disclosure by recipients makes it difficult to evaluate the effectiveness of the subsidy and prevents governments and researchers from learning how to plan and prepare for the next similar economic crisis. Using a unique hand-collected dataset, we document that approximately 70% of Canadian firms disclosed their wage subsidies received. We also find that firms increasing their contemporaneous dividends were more reluctant to disclose – suggesting that firms may not wish to volunteer information suggesting that they may not have needed such subsidies from an annual cash flow perspective, and that such subsidies were perhaps redirected to shareholders.

Our research contributes to the emerging literature on how and what firms disclose when they receive government subsidies (e.g., Huang, 2022; Lee et al., 2017). We are not aware of any research that has comprehensively examined firms' incentives in disclosing specific subsidies received. Our study contributes to the discussion on how government subsidies should be disclosed (e.g., Stadler and Nobes, 2018), and should be of interest to governments and accounting standardsetters.

The remainder of this study is organized as follows. The next section provides a background primer on the CEWS subsidy, while section 3 develops our hypotheses after a discussion of the relevant literature. Research design and data description are introduced in section 4. Section 5 presents the results from regression analyses and describes our robustness tests, while section 6 summarizes and concludes.

### 2. A Primer on CEWS

In the absence of vaccinations and antivirals, CEWS was viewed a necessary program at the onset of pandemic lockdowns as the economy slowed down driven by an insufficient demand as well as deficient supply. The significant decline in both demand and supply of non-essential goods reflected consumers' and employees' focus on their well-being instead of their normal consumption and production activities. CEWS enabled businesses to retain their employees and remain prepared when things returned to normal.

Businesses reacted positively to CEWS, in part because participating in it could be viewed as part of an organization's corporate social responsibility. Gosselin, Godbout, Gagné-Dubé and St-Cerny (2020) favourably describe the Canadian government's initial and rapid launch of subsidy programs, and how it tried to help just about everyone. Li, Bao, Hu and Zerbino (2020) describe the Canadian government's reliance on tax policy and fiscal instruments to support workers and business during Covid-19.

Eligibility for CEWS did not require applicant firms to document that the decline in revenue was related to Covid-19, in part because it would have been almost impossible to establish

a causal link. However, not requiring such a causal link meant that a firm which divested one of its divisions with at least 30% of total consolidated revenues in March 2020 (the minimum revenue reduction percentage required for CEWS eligibility at that time) could arguably apply and be eligible for CEWS for the duration of the CEWS program because its revenues would be at least 30% lower compared to January / February 2020 (assuming no other revenue increases during the pandemic).

The CEWS subsidy was the greater of 75% of pre-crisis weekly wage and the actual weekly wage paid to the employee during the Covid-19 pandemic, up to a dollar limit of \$847 per week per employee.<sup>3</sup> Employers satisfying the requisite Revenue Reduction Percentage (RRP) criterion for CEWS eligibility were often reimbursed 100% of wages paid if they offered reduced wages during the Covid-19 pandemic. For example, if the pre-crisis weekly wage was \$1,000 and the weekly wage paid during the pandemic was \$750 (presumably for less work during the pandemic), then the employer would be reimbursed 100% of the \$750 weekly wage paid since it was not greater than 75% of the pre-crisis wage, and as long as it was not greater than the \$847 weekly dollar limit.

CEWS was delivered via the "tax pipeline" administered by the CRA. This channel was expeditious since all businesses already had an account with the CRA, and subsidy amounts – once approved – could be deposited into the bank accounts linked with the taxpayers' accounts in a manner similar to any income tax refunds. Another similarity between the CEWS subsidy and income taxes payable is that businesses could argue that they felt obliged to apply for CEWS for competitive reasons if other firms in their industry were also applying for CEWS, and if they were

<sup>&</sup>lt;sup>3</sup> The dollar limit of weekly CEWS support varied over time and approximated 75% of the \$52,600 average annual wage of Canadians in 2019. CEWS, therefore, was targeted towards average wage earners who would experience economic hardship without a subsidy, and who likely spent all of their earnings on the necessities of life.

eligible based on the strict interpretation of the rules. Managers could claim a responsibility to shareholders to take advantage of income tax legislation to legally minimize taxes payable and maximize subsidies receivable, since otherwise they would face a cost disadvantage against their competitors.

During the duration of the CEWS program from May 2020 to November 2021, the Canadian government paid out \$98.6 billion in wage subsidies for 4,840,590 approved applications (a 99.3% acceptance rate) from 457,630 unique private and public businesses.<sup>4</sup> This program was offered for 21 periods of four weeks each. The high approval rate is not surprising since it was reasonably easy for applicant businesses to demonstrate the central criterion, namely a RRP of varying amounts over time compared to the baseline period of the same month in the year before the pandemic (e.g., April 2020 versus April 2019) or compared to the average of the two month period immediately preceding the pandemic (i.e., January and February 2020).

Once the rules of the subsidy became well established, the CEWS program garnered much criticism from journalists and academics. Lanthier (2020) describes CEWS as a business subsidy rather than a conduit for a wage subsidy to employees since businesses received CEWS even if they continued operating without interruptions, and their employees continued working the same number of hours (remotely or in person) as before the pandemic. CEWS benefits were not limited to hours missed working by employees due to lower demand for the employers' products and services.<sup>5</sup> Corak (2021, p. 4) describes this overkill as part of the government's dilemma of "supporting too few or supporting too many Canadians."

<sup>&</sup>lt;sup>4</sup> As of December 5, 2021 – accessed at https://www.canada.ca/en/revenue-agency/services/subsidy/emergency-wage-subsidy/cews-statistics.html

<sup>&</sup>lt;sup>5</sup> In contrast, Germany's successful *Kurzarbeit* ("short work") scheme paid employees (via their employers) only for missing work hours. If the employees missed no working hours, then the *Kurzarbeit* would have paid out nothing. *Kurzarbeit* subsidized 60% of employees after-tax wages for up to 12 months (International Monetary Fund News 2020). It is approximately equivalent in generosity to the CEWS since the 60% subsidy in Germany was not taxable

The lack of targeting meant that most jobs subsidized were not necessarily at risk of being lost. Since CEWS recipients did not have to demonstrate the need for cash, the subsidies could flow through to higher reported incomes, higher dividends or higher executive compensation,<sup>6</sup> confirming that the legal incidence of subsidies does not always reflect the economic incidence of the subsidies.

In their analysis of 389 CEWS recipients, Brethour, Cardoso, Milstead and Subramaniam (2021) show that "more than a third [of the CEWS recipients] posted revenue increases for the year. That doesn't mean those companies didn't play by the rules, but it indicates the decline in their business was fleeting." Some CEWS recipients ended up reporting higher profits in 2020 compared to 2019.<sup>7</sup> Monpetit, Nakonechny and Hétu (2020) identified 213 public corporations listed on the Toronto Stock Exchange (TSX) that received CEWS. These authors analyzed 53 of such CEWS recipients, of which 19 (or 36%) reported higher profits during the Covid-19 year compared to the previous non-pandemic year. Gatehouse (2020) describes the example of Royal Ottawa Golf Club that reported a surplus of \$825,000 during the first year of the pandemic compared to a surplus of \$43,000 reported in 2019 fiscal year (an increase of more than 18-fold). Welsh and McLean (2020) report how Extendicare – a long-term care business – paid \$10.5 million in dividends to its shareholders in 2020 while it received a CEWS subsidy of \$21 million in the same year.<sup>8</sup>

while CEWS in Canada was taxable. These two subsidies are equivalent at an average tax rate of 20% on median wages, or 75% (1-0.20) = 60%.

<sup>&</sup>lt;sup>6</sup> Later in 2021, the government introduced a new rule requiring businesses to repay CEWS if they also increased their executive compensation from the pre-pandemic levels.

<sup>&</sup>lt;sup>7</sup> Examples of firms reporting higher profits include Leon's (which received \$32 million in CEWS benefits) and Extendicare (which received \$82.2 million in CEWS benefits).

<sup>&</sup>lt;sup>8</sup> Other jurisdictions reported a backlash against companies that increased their dividends in the year of receiving state subsidies. For example, Fox-Wizel Ltd in Israel forfeited promised government aid of approximately NIS 15 million when there was a backlash for paying out NIS 14 million in dividends to its shareholders (Times of Israel, 2020).

As a result of this lack of targeting, Smart (2020) estimates that the cost to save one job for one month was about \$14,500 as of September 2020 – an amount likely to be significantly higher if his estimation was to be done a year later. Analysis by Smart (2020) and Smart and Eisen (2021) show that 4,170 companies (about 1% of all CEWS recipients) were part of corporate groups with assets of \$600 million or more, and included subsidiaries of multinationals.

The lack of targeting was similar for the U.S. Paycheck Protection Program (PPP), a U.S. \$800 billion wage subsidy program enacted and delivered in the first phase of Covid-19. Autor et al (2022) estimate the cost of saving a job for one year to be \$169,300, an amount much greater than the \$58,200 average compensation. This analysis estimates that the PPP handed out \$3.13 to businesses for every \$1 in wages it prevented from being lost. Similar to the Canadian experience, the subsidy ended up benefitting not only workers, but also shareholders and creditors.

The widespread availability of wage subsidies may also explain why the number of companies filing for bankruptcy or restructuring proposal declined in 2021 compared to both 2019 and 2020, and was the lowest in the third quarter of 2021 since at least 1987.<sup>9</sup> Statistics from Office of the Superintendent of Bankruptcy Canada show that bankruptcies across Canada were 15% lower in the third quarter of 2021 compared to the same period in 2020, and 35% lower compared to the same period in 2019. The support from CEWS may also have allowed zombie firms to survive longer than otherwise, thereby tying up government resources that could be reallocated to more profitable ventures. CEWS could also have made labour artificially cheap, perhaps discouraging new investments in technology. Quoting Corack, Al-Mallees describes the "danger

<sup>&</sup>lt;sup>9</sup>Innovation, Science and Economic Development Canada, Office of the Superintendent of Bankruptcy Canada at https://www.ic.gc.ca/eic/site/bsf-osb.nsf/vwapj/Insolvency-Statistics-Q3-2021-EN.pdf/\$file/Insolvency-Statistics-Q3-2021-EN.pdf

of the wage subsidy program ... is that it sets a precedent for providing excessive subsidies to businesses and thereby stifling innovation."

While the amount of CEWS subsidy was proportional to the amount of payroll, it is important to note that CEWS was triggered entirely and solely by a reduction in *monthly* revenues that could be imposed externally by the Covid-19 pandemic, or engineered opportunistically to attain some "down time" for the employees over the duration of the various subsidy programs, or to work on new product developments that could generate future revenues. Net income (and its labour productivity determinant) during Covid-19 periods did not feature into CEWS eligibility and support, thereby allowing many CEWS recipients to report higher net incomes during the pandemic. While accounting principles require labour costs incurred for new product development to be capitalized instead of being expensed, the CEWS calculator did not differentiate between expensed and capitalized labour outlays. Ignoring net income in determining CEWS support allowed labour productivity to remain obscured. As an unintended consequence, CEWS may have incentivized and subsidized new product development and generation of future revenues instead of subsidizing the opportunity cost of losing current revenues during a pandemic.

#### 3. Literature Review and Hypothesis Development

Larcker et al (2020) assert that the "Covid-19 pandemic provides a unique setting to examine disclosure choices in a situation of extreme uncertainty that extends across all companies." Unlike an earlier strand of literature on how corporate disclosures impact future firm performance (e.g., Botosan, 1997; Miller, 2002), we examine the contemporaneous association between disclosure and firms' dividend payouts.

The literature on voluntary disclosure suggests that managers' disclosure decisions are largely self-serving motivated to secure their jobs or be entitled to higher compensation (see Beyer, Cohen, Lys, and Walther (2010) for a review). Zhou (2022) finds that firms' reluctance to reveal proprietary information is often tied with disguising managers' self-interest. Our study can be viewed as an extension to this literature by documenting that managers' reluctance to reveal information could also reflect attempts to divert business subsidies (received on behalf of employees) to shareholders in the form of higher dividends.

In a Canadian Covid-19 context, Anonymous et al. (2022) document that firms that reported lower incomes (compared to the pre-pandemic year) used significantly more qualitative disclosure about the impact of Covid-19 – as measured by the count of adjectives and adverbs in their disclosures. Tasios et al's (2020) investigation of 40 corporations listed on the Athens Stock Exchange found less profitable firms were less likely to disclose Covid-19 implications in their disclosures.

Firms' disclosure about government wage subsidies from governments is of interest to shareholders as well as other stakeholders such as labour groups and unions, taxpayer citizens, competitors and the media. Huang (2022) describes how greater transparency of government subsidies can benefit both society and governments by informing taxpayers about how tax collected is spent. One reason for widespread media and societal interest is that CEWS may have been regarded as a business subsidy rather than a wage subsidy. Just like society's and media's interest in corporate taxes paid, the public and the media showed concern about actual or perceived inequity in CEWS subsidies received by corporations that may not show the cash flow need – ex poste – for the subsidy, nor suffer any decline in reported net incomes, or whose shareholders enjoyed higher dividend payouts. The stated focus of CEWS was intended to be on workers facing

job loss, and not employers. However, lobbying by the small business community successfully reframed the discourse from helping employees via the business conduit to helping the businesses themselves during an uncertain pandemic period.<sup>10</sup> As designed, CEWS arguably became less about an investment in labour by firms, and more about firms wanting to improve their financial performance, growth, dividend payouts or leverage. Al-Mallees (2022) refers to the generosity of CEWS as a move towards a basic income for small business rather than a basic income for individuals.

In a non-pandemic context, De Simone, Lester and Raghunandan (2021) show that firms are reluctant to disclose labour subsidies, with governments often not insisting on greater transparency despite the established link between disclosure of business employment subsidies and economic effectiveness of such subsidies. In other words, corporate disclosure can facilitate more efficient subsidies. At the micro firm level, Li, Li, Tan and Zeng (2021) show that Chinese listed firms reduced their disclosure of subsidy information when their exported products faced anti-subsidy investigation or countervailing duties, with the reluctance to disclose greater when the affected firms earned higher export revenues from the product under investigation or faced higher countervailing duties. Dong, Raghunandan and Rajgopal (2022) find that recipients of job creation subsidies are more likely to meet their job creation targets if they are more profitable, have higher growth, and less leverage, thereby supporting the argument that wage subsidies may be misdirected if given to less successful firms.

The literature has shown that managers are less incentivized to disclose subsidies or other acts if they are uncertain about investors' response to their disclosures (e.g., Dutta and Trueman

<sup>&</sup>lt;sup>10</sup> See for example, Bill Curry and Chris Hannay (2021) "Ottawa in discussions to extend pandemic aid beyond Oct. 23 deadline" *The Globe and Mail*. October 6<sup>th</sup> at <u>https://www.theglobeandmail.com/politics/article-freeland-signals-openness-to-extending-some-pandemic-support-programs/</u>

2002; Fishman and Hagert 2003). CEWS could have introduced such uncertainty since managers may not be convinced during the early days of the pandemic how retaining the employees and applying for CEWS (as opposed to laying off employees) would be perceived by investors. Weekly statistics on the CEWS portal showed that many applicants applied for CEWS much later since retroactive applications were permitted.

Most of the existing wage subsidy literature focuses on contexts of *new* job creation during normal times, and not on jobs retained. There is a dearth of research on large scale wage subsidies offered to a very large cross-section of firms during a crisis, mostly because we have not experienced a crisis such as a pandemic in recent times.

This study fills the gap and extends the literature by examining whether firm-specific characteristics have an impact on whether they voluntarily disclose their wage subsidy. More specifically, we examine whether firms' dividend payouts in the year of subsidy were correlated with firms' decision to disclose government wage subsidies in their annual reports. The decision to voluntarily disclose certain information is often based on the criteria of whether the disclosed information will improve the company's reported performance or corporate image. We conjecture that firms wishing to pay out higher dividends in the same year may not wish to voluntarily disclose the source of their incremental payouts (i.e., CEWS subsidies) since it may reveal that shareholders benefitted from the wage subsidy. News of shareholders benefitting from a wage subsidy during a pandemic when there was widespread bad economic news could impact a firm's reputation and subsequent stock performance. Our hypothesis (in alternate form) is as follows:

H1: Ceteris paribus, firms increasing their dividend payout (compared to prior year) in the year a wage subsidy is received are less likely to voluntarily disclose their wage subsidy.

## 4. Data and Research Design

## **Sample construction**

Our sample starts with a search of all Canadian publicly-traded firms available on Compustat for the fiscal years 2020 and 2021. After removing income funds and firms with missing revenues, we narrow our sample down to 1,712 firm-year observations. Among these 1,712 firm-year observations, 665 firm-year observations (368 individual firms) were found to have received CEWS in 2020 and/or 2021 from the CEWS registry set up by the government.<sup>11</sup> Missing Compustat variables other than revenue reduced this sample size of CEWS recipients to 620. A manual search of the annual reports and MD&A reports of these 620 firm-year observations revealed that 434 firm-years (70%) qualitatively disclosed receipt of CEWS subsidies.

#### **Measure of test variables**

CEWS disclosure (*CEWS\_Disclosure*) is our dependent variable in the following regression analyses and is coded 0 for firms not disclosing it and 1 for firms disclosing CEWS in their annual reports and / or MD&A. For the 620 firm-year observations that received CEWS, we retrieved their dividend payouts to determine whether they increased their dividend payout in 2020 or 2021 compared to the previous year. We construct an indicator variable, *DIV\_INC*, that takes the value of 1 if the dividend paid in the sample year is higher than in the previous year, and 0 otherwise.

#### **Control variables**

<sup>&</sup>lt;sup>11</sup> CEWS registry at <u>https://apps.cra-arc.gc.ca/ebci/hacc/cews/srch/pub/dsplyBscSrch?request\_locale=en</u>

We follow Huang (2022) and include the following firm and industry variables in our regression model to control for factors that may be associated with a firm's decision to disclose their government subsidy. These control variables include market-to-book ratio of equity (MTB), earnings volatility (EARN\_VOL), industry concentration ratio (HHI), an indicator for earnings increases (EARN\_INC), leverage (LEV), return on assets (ROA), stock returns (RETURN), an indicator for loss firms (LOSS), firm size (SIZE), and the choice of big-four auditors versus not (BIG4). Stock returns, return on assets, loss indicators, and increased-earnings indicators are included to control for stock and financial performance. Firms with significantly higher performance may be reluctant to disclose their CEWS because the public may question their eligibility at a political level; on the other hand, firms with significantly lower performance may be reluctant to disclose their CEWS because management does not want to remind investors that profits would be even lower in the absence of CEWS. Earnings volatility is used to proxy a firm's uncertainty, and firms with higher volatility may be more willing to disclose government subsidies because the subsidies are a source of help when they are in trouble. In addition, we include firm size, leverage and market-to-book ratio to control for the demand for firm information. For instance, large firms may be more likely to disclose CEWS because of greater scrutiny by analysts and others. On the other hand, large firms may also not disclose their CEWS subsidies on materiality grounds, thereby making our hypothesis two-sided. We expect leveraged firms to be more likely to disclose CEWS to inform creditors that cash inflows from CEWS would make debt more serviceable by the borrowing firm. The industry concentration ratio (HHI) is included to control for the effect of industry concentration. We expect a higher industry concentration to be associated with less disclosure about CEWS since firms in highly concentrated industries are less pressured by their peers to improve disclosure practices. It is also possible that high industry

concentration may lead to more disclosure since such firms are more closely monitored by the public and the media. Finally, we expect firms audited by the Big Four accounting firms to be more likely to disclose CEWS given the self-selection or the pressure for such firms to engage in better disclosure.

We control for industry based on Larcker et al (2020) who find higher levels of covidrelated disclosures in industries impacted much more by the pandemic. We use the one-digit SIC level in our main tests to avoid a reduction in sample size that arises by controlling industry effects at the two-digit SIC level,<sup>12</sup> with two-digit SIC level used in our robustness tests. Following Huang (2022), we also control for the year effects by including a year dummy for 2021.

A preliminary analysis of the data revealed some extreme values. To mitigate the effect of these outliers, we winsorize all continuous variables at 1% and 99%.

## The model

Given our dependent variable is coded 0 or 1, we estimate our regression models using probit and logit procedures and control for the variables discussed above. Our regression model is as follows:

 $CEWS\_Disclosure = \beta_0 + \beta_1 DIV\_INC + \beta_2 BIG4 + \beta_3 MTB + \beta_4 EARN\_VOL + \beta_5 HHI$   $+ \beta_6 EARN\_INC + \beta_7 LEV + \beta_8 ROA + \beta_9 RETURN + \beta_{10} SIZE + \beta_{11} LOSS + \beta_{12} Year \ 2021 + \beta_1 Industries + \epsilon$ (1)

where CEWS\_Disclosure = 1 if the receipt of CEWS was disclosed in its annual report and / or MD&A, and 0 if not disclosed;

<sup>&</sup>lt;sup>12</sup> Use of a one-digit industry code is used in small sample studies like ours (as recommended in Aggarwal, Prabhala and Puri, 2002).

 $DIV_{INC} = 1$  if the firm increased its dividend payout compared to the previous year, and 0 otherwise;

BIG4 = 1 if firm is audited by a Big 4 audit firm, and 0 otherwise;

MTB = the market value of a firm divided by its book value of equity;

EARN\_VOL = standard deviation of annual earnings before extraordinary items scaled by total assets over the previous 5 years;

HHI = Herfindahl-Hirschman index calculated as the sum of squared market shares of all firms in each 2-digit SIC industry during year t;

EARN\_INC = 1 if a firm's net income increases from year t-1 to year t, and 0 otherwise;

LEV = the sum of short-term and long-term debt divided by total assets at the end of year t;

ROA = earnings before extraordinary items scaled by average total assets for year t.;

RETURN = the difference between the end-of-year stock prices at year t and at year t-1 divided

by the end-of-year stock price at the end of year t-1;

SIZE = the natural log of total assets;

LOSS = 1 if earnings before extraordinary items are negative, and 0 otherwise.

As motivated in our hypothesis 1, the sign for  $\beta_1$  is expected to be statistically significant and negative, thereby predicting that firms which increase their dividend payout in the pandemic year are less likely to disclose their receipt of CEWS.

#### 5. Results

#### **Descriptive Results**

Panel A of Table 1 summarizes our sample selection procedure, while Panel B summarizes the descriptive statistics of our dependent and independent variables. We identify 1,712 Canadian firm-year observations from Compustat after eliminating income funds and firms with missing revenues. Our search of the CEWS registry found 665 firm-year observations where CEWS was received. After deleting samples due to missing variables, our final sample size is 620.

Panel B of Table 1 presents the variable names, the number of observations, the mean and the standard deviation, as well as the 1<sup>st</sup> percentile, 50<sup>th</sup> percentile and 99<sup>th</sup> percentile of all variables used in subsequent regression analysis. Of the 620 firm-years where CEWS was received, 434 (or 70%) firm-years included disclosure of CEWS in their annual reports or MD&A reports. We find that 21.5% of sample firms paid out higher dividends compared to the prior year and 51.6% reported higher earnings before extraordinary items compared to prior year. The mean ROA is - 17%, with 54% of firm-year observations reporting negative earnings before extraordinary items, confirming the overall negative impact of the pandemic on Canadian public firms' profitability in 2020 and 2021.

Table 2 presents the Pearson's correlations among the variables used in our regressions. No correlations are higher than 50% with the exception of the correlation between size and the choice of big-four audit firms, suggesting that multicollinearity is not a major concern in our study. If we drop BIG4, all our regression results remain qualitatively the same. The correlation of *CEWS\_Disclosure* with *DIV\_INC* is negative and significant, foreshadowing the empirical evidence to support our hypothesis.

Among our 620 firm-year observations, 186 did not disclose receipt of CEWS, 93 mentioned receiving CEWS without providing amounts, and 341 disclosed their CEWS with specific amounts. One reason put forward for not disclosing CEWS is that the amounts may not be material. Nevertheless, a significant proportion of firms in our sample disclosed CEWS when discussing accounting treatments. For example, firms disclosed in their discussion of accounting

policies whether they accounted for government subsidies as a negative expense or as other income. Many companies disclosed CEWS even when the amounts received were quite modest. We calculate a ratio of CEWS amount divided by the absolute value of net income or loss and find that 176 out of the 341 observations (or 36.6%) with detailed CEWS amounts disclosed their subsidy amounts in their annual reports or MD&A Reports even when such amounts were below the assumed materiality threshold of 5% of net incomes. This allows us to suggest that accounting materiality is not all that drives firms to disclose their CEWS or their CEWS amounts.

# **Baseline results**

We present the baseline results for Hypothesis 1 in Table 3, with columns 1 and 2 presenting the results for hypothesis 1 under the probit and logit model, respectively. In both columns, we find that *CEWS\_Disclosure* is significantly and negatively associated with *DIV\_INC*, with both relationships being statistically significant at the 5% level. Our results confirm that firms that increased their dividend payout during the pandemic years were less likely to disclose CEWS compared to firms that did not increase their dividend payout during the pandemic. We argue that this may reflect dividend-increasing firms' reluctance to disclose their new source of cash (CEWS) out of concern that some stakeholders may question the political acceptability of diverting government wage subsidies to shareholders. The economic or practical interpretation of the coefficient of -0.343 on *DIV\_INC* in column 1 is estimated by the marginal effect test. Assuming all other variables at their mean values, dividend-increasing firms had a 62.6% probability of disclosing CEWS compared to 74.7% for firms that did not increase their dividend payouts were 12% less likely to report CEWS compared to other firms.

In columns 1 and 2, the industry effects are controlled by including a one-digit SIC code in the regression model. In columns 3 and 4, the industry effects are controlled by substituting the one-digit SIC with a two-digit SIC. Because a few industries lack sufficient data for a logit/probit estimation, our sample size is reduced from 620 in columns 1 and 2 to 508 in columns 3 and 4<sup>13</sup>. With this smaller sample size, our findings remain unchanged. *CEWS\_Disclosure* is significantly and negatively associated with *DIV\_INC* under both probit and logit regression estimation models that we report in columns 3 and 4. Both these coefficients are statistically significant at the 1% level. Under the probit model reported in column 3, the coefficient on *DIV\_INC* is -0.574. This indicates that when all other variables take their mean values, the probability that a dividendincreasing firm discloses its CEWS is 49.5% while the same probability for firms that did not increase their dividends is 68.1%. The difference between the two groups' probability of disclosure is 18.6%.

For control variables, we find *CEWS\_Disclosure* to be negatively associated with firm size across all four columns, suggesting that large firms may ignore disclosing CEWS perhaps because of immateriality. ROA is positively associated with *CEWS\_Disclosure* in all four columns, indicating that firms with higher financial performance are more likely to disclose CEWS. This implies that firms with poor earnings may not want to remind investors that the performance would be even worse without the help of CEWS. Our control variables are not always significantly associated with the firms' decisions to disclose their CEWS in all four columns. It is not uncommon to find control variables to be statistically insignificant in other voluntary disclosure studies. For instance, Frankel, Johnson and Skinner (1999) examine the motivations for voluntary conference calls and find that only 4 out of 13 of their independent variables (including test and

<sup>&</sup>lt;sup>13</sup> We use one-digit SIC for other analyses in order to have a higher sample size.

control variables) are significantly associated with voluntary disclosure decisions.

#### **Cross-sectional Analysis**

We next examine the channels through which dividend increases are associated with the firms' decision to disclose the receipt of CEWS. Our results from Table 3 confirmed that firms that increased their dividend payouts in a pandemic year compared to the prior year had a lower likelihood of disclosing their CEWS subsidies. This could be consistent with such firms diverting some cash from CEWS to pay higher dividends which they do not wish to make transparent to all stakeholders. As CEWS was targeted for employees, the financial press and other public stakeholders may voice concerns if the incidence of this subsidy falls onto shareholders in the form of higher dividends. We subject this result to four moderators: cash on hand at the end of the prior year, loss firms, earnings growth, and earnings management.

The four moderators are selected based on the theory that firms that pay out a surprise additional dividend when not expected to do so, the "surprise" dividend attracts greater scrutiny or attention, with the public more likely to inquire about the source of the higher dividends and the sustainability thereof. In order to avoid such public scrutiny, such 'surprise' dividend-increasing companies may be less likely to disclose CEWS. Firms with smaller cash reserves are less likely to increase dividend payments (Al-Twaijry, 2007) since they may arguably not have sufficient cash to pay higher dividends. Firms with losses and firms with decreased reported earnings are less likely to be expected to pay higher dividends since financial performance and dividend payout ratio is generally positively correlated (Pruitt and Gitman, 1991). Empirical evidence also suggests that firms that increase dividends are likely to engage in upward earnings management to send coordinated signals to the financial markets (Koerniadi & Tourani-Rad, 2011). Conversely, firms

with downward earnings management are less likely to increase their dividend payments. As a result, when firms with downward earnings management pay out an unexpected higher dividend, they are less likely to disclose CEWS to avoid attracting public attentions. We examine these four moderators –cash on hand, loss firms, earnings growth, and earnings management - in Tables 4 through 7, respectively.

Table 4 reports our results for whether H1 is more pronounced for firms facing greater cash constraints. We expect the negative association between CEWS disclosure and higher dividend payouts to be more pronounced when firms have a lower cash reserve at the beginning of the year. This is because such firms are not expected to payout higher dividends, and therefore when they actually pay higher dividend, they are more likely to be reluctant to identify CEWS as a possible source for the higher contemporaneous dividends.

We divide our sample into two subsamples: firms with cash holdings greater than or equal to the median cash holdings and firms with cash holdings less than the median cash holdings,<sup>14</sup> where cash holdings is an aggregate of a firm's cash and cash equivalents balances at the end of the previous year as a percentage of total assets. We present the probit results of the association between low cash-holding and high cash-holding subgroups, respectively, in columns 1 and 2 and the logit results in columns 3 and 4 of Table 4. We find that our hypothesis 1 is not rejected in the low cash-holdings subgroup (columns 1 and 3), but is rejected in the high cash-holdings subgroup (columns 2 and 4). These results offer additional evidence that when firms with lower cash holdings increased their dividend payouts during the pandemic, they were more reluctant to disclose their CEWS subsidies. In contrast, firms with higher cash holdings were not as reluctant to disclose their CEWS subsidies.

<sup>&</sup>lt;sup>14</sup> The median cash holdings is 5.55%.

Table 5 reports our results on whether the association between the disclosure of CEWS and the higher dividend payout is different in firms with and without losses. We expect the negative association between CEWS disclosure and higher dividend payouts to be more pronounced in loss firms than in other firms. Loss firms that increase their dividend payouts (when not expected to do so) may not want to disclose their wage subsidies for fear that the public may question about the potential diversion of wage subsidies to shareholders. We separate our sample into two subgroups: firms with negative earnings before extraordinary items (i.e., LOSS=1) and firms with a positive or zero earnings before extraordinary items (i.e., LOSS=0). In columns 1 (3) and 2 (4), we present the results of re-testing H1 based on a probit (logit) model in the subgroup of loss firms but not supported by the subgroup of non-loss firms.

Table 6 reports our test results examining whether the negative association between CEWS\_Disclosure and increases in dividend payout is more pronounced in firms with earnings lower than those reported in the prior year. We argue that compared to firms with increased earnings, firms with decreased earnings are less likely to disclose CEWS as they are more likely to be questioned by the public about whether CEWS is the source of their dividend payments.

Once again, we divide our sample into two groups: firms with increased earnings (EARN\_INC=1) and firms without increased earnings (EARN\_INC=0) relative to the previous year. The results of H1 in the subgroup of firms with increased earnings are reported in column 1 based on probit estimation and column 3 based on logit estimation. The test results of H1 in the subgroup of firms are reported in column 2 based on probit estimation and column 4 based on logit estimation. Consistent with our prediction, H1 is supported in the

subgroup of firms that do not report higher earnings, but not supported in the subgroup of firms that do report higher earnings compared to the previous year.

Finally, we test whether the association between the decision to disclose CEWS and the decision to increase dividends varies with the extent of earnings management. This time, we divide our sample into two subgroups based on their earnings management (EM) strategies. Following Cohen and Zarowin (2010), we calculate *EM* based on a modified Jones model. One subsample consisting of firms with *upward* earnings management has a positive EM, while the other subsample consisting of firms with *downward* earnings management has a negative EM. In columns 1 (2) and 3 (4) of Table 7, we report the test results of H1 in the subgroup of downward (upward) earnings management using probit and logit models, respectively. We cannot reject H1 that firms with higher dividend payouts are less likely to disclose CEWS in columns 1 and 3 for firms that engaged in upward earnings management. To summarize, when a firm's decisions to increase dividends is unexpected, firms are reluctant to disclose CEWS. On the other hand, when the decisions to increase dividends is widely expected (e.g., non-loss firms or firms with higher-than-median cash holdings), firms may be less hesitant to disclose CEWS.

## Endogeneity

We recognize that higher dividend payouts in a given year could be an endogenous event within firms that do not disclose CEWS. To account for this endogeneity, we conduct an instrumental variable approach in a two-stage least square regression (2SLS).

The instrumental variable we construct is the mean value of DIV\_INC within an industry in a sample year. When more firms within the same industry increase their dividend payments, a

firm might be pressured to follow its peers and increase its dividend payout as well. However, there is no direct reason that a firm's decision of whether to disclose firm-specific CEWS should be associated with the mean value of DIV\_INC within an industry. In the first stage of regression, we use DIV\_INC as the dependent variable and use the average of DIV\_INC within an industry as the instrumental variable to predict the likelihood of a firm increasing their dividend payout. This predicted value, DIV\_INC\_hat, replaces DIV\_INC in the second stage of regression.

In the first stage, we find that the instrumental variable is positively associated with DIV\_INC, and this association is significant at the 1% level (untabulated). We use this instrumental variable in lieu of DIV\_INC in equation 1 and find a significant association between the two variables. However, when we include both instrumental variable and DIV\_INC in equation 1, the association between CEWS\_Disclosure and the instrumental variable is no longer statistically significant (untabulated). These results suggest that there is no direct impact of this instrumental variable on the dependent variable (i.e., CEWS disclosure), and the impact of the instrumental variable on CEWS\_Disclosure is only indirectly through the test variable DIV\_INC. These results indicate that our instrumental variable satisfies the exogeneity requirements in a 2SLS regression test.

The regression results of the second stage regression are reported in Table 8. We follow Table 3 and include 1-digit SIC and 2-digit SIC separately. Our results show that *CEWS\_Disclosure* remains negatively associated with the increase in dividend payout across all four columns, with all associations being statistically significant at the 1% level. The results show that our test results regarding H1 is robust to an instrumental variable approach addressing the endogeneity concerns.

#### **Disclosure Details**

Among our sample of 620 CEWS recipients, 93 firm-year observations included only a qualitative disclosure of receipt of CEWS subsidies in firms' annual reports and / or MD&A, while 341 firm-years reported the dollar amount received from CEWS. We conduct additional robustness tests to investigate the factors associated with disclosing the CEWS dollar amounts. We create a *CEWS\_Detail* variable that equals 2 if a firm received CEWS and revealed the amount in its annual report and / or MD&A, 1 if a firm received CEWS but did not disclose the amount, and 0 if a firm received CEWS (as shown on the CRA registry) but did not disclose it in its annual report and / or MD&A.

We use the ordered probit model and the ordered logit model to test the association between CEWS\_Detail and DIV\_INC in Table 9. The coefficient of DIV\_INC is still negative, but only marginally significant at the ten percent level. This suggests that the decision to report dollar amounts of CEWS received is associated with the dividend payout decision, while dividend-increasing firms continue to be more reluctant to disclose the dollar amount of CEWS received.

#### 6. Concluding Remarks

Given the sudden occurrence of the Covid-19 pandemic, CEWS was considered a necessary bailout for employees who had been sidelined from their employment through no fault of their own. It was one of several programs intended to help 'freeze' the economy and businesses until the health shock had been contained, and then allow the economy and businesses to resume their normal activities.

However, the eligibility rules for this Canadian subsidy made it seem like it was more of a business subsidy and not a wage subsidy for jobs that would otherwise have been lost. CEWS

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recipients did not have to demonstrate the need for cash, and therefore the subsidy could and often did flow through to higher dividend payouts.

Similar to the public's and media's interests in corporate taxes paid, the public and the media showed an interest in actual or perceived inequities if CEWS was given to firms that may have used some of their CEWS subsidies to pay out higher dividends to their shareholders. As designed, CEWS may have become less about an investment in labour by firms, and more about firms wanting to improve their financial performance.

Most of the existing wage subsidy literature focuses on contexts of *new* job creation during normal times, and not on jobs retained during a widespread crisis. This study extends the disclosure literature by examining whether firm-specific characteristics have an impact on whether firms voluntarily disclose their wage subsidy received. Our analysis shows that firms were reluctant to disclose their CEWS if they increased their dividend payouts in the same year that they received CEWS. This is consistent with the hypothesis that firms may have been motivated to reward their shareholders (in the form of higher dividends) with the new CEWS inflows.

This study contributes to an awareness of firms' disclosure behaviour, and how investors and other stakeholders can anticipate firms' financial disclosure. It also contributes to an evaluation of a wage subsidy program so that policy makers can institute better designed programs – perhaps with legislatively required disclosure at firm level for future pandemics. Such fiscal antibodies may be necessary to alleviate the economic hardship during any future health crisis where both the demand and supply of labour services shrink.

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# **Appendix: Definitions of Variables**

Variable	Variable	Data
Name	Definition	Source
CEWS_Disclosure	a dummy variable that equals 1 if the receipt of CEWS was	Manually collected
	disclosed in its annual report and / or MD&A, and 0 if not	
	disclosed;	
CEWS_Detail	equals 2 if a recipient of CEWS discloses the CEWS	Manually collected
	amount received in the annual reports and / or MD&A, and	
	equals 1 if a recipient disclosed CEWS without the detailed	
	recipient does not disclose it:	
DIV INC	a dummy variable that equals 1 if the firm increased its	Compustat
DIV_INC	dividend payout in the sample year compared to the	Compustat
	previous year, and 0 otherwise;	
BIG4	a dummy variable that equals a1 if firm is audited by a Big	Compustat
	4 audit firm, and 0 otherwise;	-
MTB	the market value of a firm divided its book value of equity;	Compustat
EARN_VOL	standard deviation of annual earnings before extraordinary	Compustat
	items scaled by total assets over the 5 years prior to year t;	-
HHI	Herfindahl-Hirschman index calculated as the sum of	Compustat
	squared market shares of all firms in each 2-digit SIC	
FADN INC	a dummy variable that equals 1 if a firm's net income	Compustat
LANN_INC	increases from year t-1 to year t and 0 otherwise.	Compusiai
LEV	the sum of short-term and long-term debt divided by total	Compustat
	assets at the end of year t;	
ROA	earnings before extraordinary items scaled by average total	Compustat
	assets for year t.;	-
RETRUN	the difference between the close price of a firm's stocks at	Compustat
	year t and at year t-1 divided by the close price at the end of	
	year t-1;	
SIZE	the natural log of total assets;	Compustat
LOSS	a dummy variable that equals 1 if earnings before	Compustat
Cash	each and cash equivalents divided by total assets	Compustat
FM	extent of unward earnings management calculated based on	Compustat
17141	a modified Jones model following Cohen and Zarowin	Compusiai
	(2010).	
DIV_INC BIG4 MTB EARN_VOL HHI EARN_INC LEV ROA RETRUN SIZE LOSS Cash EM	recipient does not disclose it; a dummy variable that equals 1 if the firm increased its dividend payout in the sample year compared to the previous year, and 0 otherwise; a dummy variable that equals a1 if firm is audited by a Big 4 audit firm, and 0 otherwise; the market value of a firm divided its book value of equity; standard deviation of annual earnings before extraordinary items scaled by total assets over the 5 years prior to year t; Herfindahl-Hirschman index calculated as the sum of squared market shares of all firms in each 2-digit SIC industry during year t; a dummy variable that equals 1 if a firm's net income increases from year t-1 to year t, and 0 otherwise; the sum of short-term and long-term debt divided by total assets at the end of year t; earnings before extraordinary items scaled by average total assets for year t.; the difference between the close price of a firm's stocks at year t and at year t-1 divided by the close price at the end of year t-1; the natural log of total assets; a dummy variable that equals 1 if earnings before extraordinary items are negative, and 0 otherwise. cash and cash equivalents divided by total assets. extent of upward earnings management calculated based on a modified Jones model following Cohen and Zarowin (2010).	Compustat Compustat Compustat Compustat Compustat Compustat Compustat Compustat Compustat Compustat Compustat Compustat

# Table 1: Descriptive Statistics

# **Panel A: sample section procedure**

Initial sample: publicly traded Canadian firms in 2020 & 2021	1,712
Minus: Firms that did not receive CEWS	-1,047
Firms that receive CEWS in 2020 and / or 2021	665
Minus: missing variables in Compustat	-45
Final sample	620

# **Panel B: summary statistics**

	Ν	Mean	SD	1st Perc.	Median	99th Perc.
CEWS_Disclosure	620	0.7	0.46	0.00	1.00	1.00
DIV_INC	620	0.21	0.41	0.00	0.00	1.00
BIG4	620	0.74	0.44	0.00	1.00	1.00
MTB	620	1.66	90.46	-54.18	1.22	45.52
EARN_VOL	620	261.92	918.04	0.06	37.01	5478.66
HHI	620	0.44	0.30	0.05	0.34	1.00
EARN_INC	620	0.52	0.50	0.00	1.00	1.00
LEV	620	0.42	0.92	0.00	0.29	3.60
ROA	620	-0.17	0.64	-2.78	-0.01	0.42
RETURN	620	1.13	7.13	-0.73	0.11	22.93
SIZE	620	5.63	2.52	-0.43	5.84	10.9
LOSS	620	0.54	0.50	0.00	1.00	1.00
Cash <sub>t-1</sub>	620	0.13	0.18	0.00	0.05	0.77
EM	489	0.00	0.72	-1.43	-0.02	2.06

Notes: The dependent measures and independent variables are defined in the Appendix.

# **Table 2: Correlations**

This table presents the Pearson's correlations among main regression variables. The dependent measures and independent variables are defined in Appendix A. \*\*\*, \*\* denote statistical significance at the 1%, and 5% levels respectively.

	CEWS_Disclosure	DIV_INC	BIG4	MTB	EARN_VOL	HHI	EARN_INC
DIV_INC	-0.052**	1					
BIG4	-0.056**	0.135***	1				
MTB	0.031	0.012	0.050***	1			
EARN_VOL	-0.039	0.106***	0.149***	0.037**	1		
HHI	0.201***	0.131***	-0.050***	0.010	0.014	1	
EARN_INC	-0.060**	0.02	0.016	0.004	0.036**	-0.025*	1
LEV	-0.016	0.026*	-0.081***	0.000	-0.014	0.034**	0.025*
ROA	0.000	0.033**	0.101***	0.007	0.018	0.012	0.007
RETRUN	0.013	-0.023	-0.076***	0.007	-0.021	-0.003	0.024
SIZE	-0.157***	0.250***	0.583***	0.036**	0.383***	-0.060***	0.045***
LOSS	0.192***	-0.285***	-0.276***	-0.031**	-0.138***	-0.017	-0.275***
	LEV	ROA	RETRUN	SIZE			
ROA	-0.427***	1					
RETRUN	0.005	0.001	1				
SIZE	-0.166***	0.208***	-0.076***	1			
LOSS	0.044***	-0.099***	0.022	-0.446***			

# **Table 3: CEWS Disclosure and Dividend Increase**

This table presents the results examining the association between a firms' decision to disclose CEWS and their dividend payout. *DIV\_INC* is an indicator variable that equals 1 if a firm's dividend increases from year t-1 to year t, and 0 otherwise. *CEWS\_Disclosure* is an indicator variable that take the value of 1 if a recipient of CEWS disclosed it in its annual report and/or MD&A, and takes the value of 0 if the recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it were manually collected from CEWS registry, annual reports and MD&A. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Probit Model	Logit Model	Probit Model	Logit Model
VARIABLES	CEWS Disclosure	CFWS Disclosure	CFWS Disclosure	CFWS Disclosure
DIV INC	_0 343**	_0 563**	_0 574***	_0.935***
DIV_INC	(0.025)	(0.026)	(0.003)	(0.004)
BIG4	0.183	0.359	0.178	0 301
D104	(0.103)	(0.33)	(0.355)	(0.359)
MTB	(0.270)	0.001	0.000	0.001
MID	(0.534)	(0.456)	(0.554)	(0.539)
FARN VOI	(0.334)	(0.430)	(0.334)	(0.337)
LARIA_VOL	(0.114)	(0.124)	(0.248)	(0.254)
нні	0 531**	0.912**	0 553	1 023
11111	(0.036)	(0.040)	(0.147)	(0.127)
FARN INC	0.026	(0.0+0)	(0.147)	0.127)
	(0.842)	(0.818)	(0.457)	(0.150)
IEV	(0.042)	-0.064	(0.437)	(0.+37)
	(0.626)	-0.004	(0.692)	(0.750)
ROA	0.21/**	0.3/3*	0.336***	0.573**
KOA	(0.049)	(0.040)	(0.004)	(0.015)
DETDIN	(0.0+9)	(0.030)	(0.004)	0.013)
KLIKUN	(0.118)	(0.101)	(0.170)	-0.019
SIZE	(0.110)	(0.101)	(0.170)	(0.133)
SIZE	-0.143	(0.000)	-0.138	(0.001)
1055	(0.000)	(0.000)	(0.001)	(0.001)
L033	(0.190)	(0.342)	$(0.0390^{+1})$	$(0.090^{+1})$
Constant	(0.104)	(0.139)	(0.019)	(0.013)
Constant	$(0.929^{111})$	(0.001)	(0.320)	(0.311)
Voor	(0.001) Included	(0.001) Included	(0.393) Included	(0.417)
I cal Industry 1 digit	Included	Included	Included	Included
Industry_1-digit	Included	Included	Included	Included
$D_{a} = D_{a}^{2}$	0 107	0.100		
rseudo-K	0.107	0.109	0.181	0.180
UDS	620	620	508	508

# **Marginal Effect**

		Value	<b>Predicted Prob</b>	<b>P-value</b>
Model 1	DIV INC	0	0.747	0.000
Model 1	DIV_INC	1	0.626	0.000

# Table 4: CEWS Disclosure, Dividend Increase and Cash Holding

This table presents the results examining the association between firms' decision to disclose CEWS and their dividend payouts separately for firms with high and low cash holdings at the beginning of the year. *Cash* is the ending balance of cash and cash equivalents at the end of a year scaled by total assets. *DIV\_INC* is an indicator variable that equals 1 if a firm's dividend increases from year t-1 to year t, and 0 otherwise. *CEWS\_Disclosure* is an indicator variable that take the value of 1 if a recipient of CEWS disclosed it in its annual report and/or MD&A, and takes the value of 0 if the recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it were manually collected from CEWS registry, annual reports and MD&A. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Probit	Model	Logit	Model
	Cash <sub>t-1</sub> <median< th=""><th>Cash<sub>t-1</sub>≥Median</th><th>Cash<sub>t-1</sub><median< th=""><th>Cash<sub>t-1</sub>≥Median</th></median<></th></median<>	Cash <sub>t-1</sub> ≥Median	Cash <sub>t-1</sub> <median< th=""><th>Cash<sub>t-1</sub>≥Median</th></median<>	Cash <sub>t-1</sub> ≥Median
VARIABLES	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure
DIV_INC	-0.562**	-0.123	-0.923**	-0.181
	(0.011)	(0.591)	(0.013)	(0.635)
BIG4	0.193	0.161	0.420	0.305
	(0.459)	(0.479)	(0.338)	(0.440)
MTB	0.009	0.000	0.020	0.001
	(0.629)	(0.638)	(0.546)	(0.605)
EARN_VOL	0.000	0.001	0.000	0.001
	(0.445)	(0.187)	(0.424)	(0.197)
HHI	0.905**	0.299	1.504**	0.570
	(0.030)	(0.374)	(0.037)	(0.338)
EARN_INC	0.349	-0.205	0.629*	-0.368
	(0.104)	(0.257)	(0.090)	(0.234)
LEV	-0.101	-0.014	-0.207	-0.020
	(0.652)	(0.838)	(0.574)	(0.867)
ROA	-0.017	0.321***	-0.028	0.532**
	(0.963)	(0.008)	(0.966)	(0.014)
RETRUN	-0.022*	0.006	-0.037*	0.014
	(0.099)	(0.719)	(0.086)	(0.643)
SIZE	-0.105*	-0.205***	-0.195**	-0.352***
	(0.056)	(0.000)	(0.042)	(0.000)
LOSS	0.260	0.175	0.513	0.302
	(0.242)	(0.390)	(0.185)	(0.382)
Constant	0.552	1.165***	0.872	1.960***
	(0.226)	(0.006)	(0.273)	(0.006)
Year	Included	Included	Included	Included
Industry	Included	Included	Included	Included
Pseudo-R <sup>2</sup>	0.126	0.136	0.129	0.137
Obs	307	312	307	312

# **Table 5: CEWS Disclosure, Dividend Increase and Loss firms**

This table presents the results of the association between firms' decisions to disclose CEWS and their dividend payout separately for loss-making and profitable firms. *LOSS* is an indicator variable that takes the value of 1 if a firm's earnings before extraordinary items is negative, and 0 otherwise. *DIV\_INC* is a dummy variable that equals 1 if a firm's dividend increases from year t-1 to year t, and 0 otherwise. *CEWS\_Disclosure* is an indicator variable that take the value of 1 if a CEWS recipient disclosed it in its annual report and/or MD&A, and takes the value of 0 if the recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it were manually collected from CEWS registry, annual reports and MD&A. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Probit	Model	Logit	Model
	LOSS=1	LOSS=0	LOSS=1	LOSS=0
VARIABLES	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure
DIV_INC	-0.792**	-0.258	-1.314**	-0.429
	(0.017)	(0.174)	(0.018)	(0.182)
BIG4	0.117	0.206	0.233	0.468
	(0.630)	(0.432)	(0.583)	(0.293)
MTB	0.000	0.006	0.001	0.013
	(0.465)	(0.729)	(0.401)	(0.709)
EARN_VOL	0.000*	0.000	0.000*	0.000
	(0.091)	(0.548)	(0.095)	(0.499)
HHI	0.243	1.017**	0.414	1.724**
	(0.490)	(0.013)	(0.503)	(0.014)
EARN_INC	0.212	-0.164	0.368	-0.235
	(0.240)	(0.463)	(0.244)	(0.534)
LEV	-0.022	-0.171	-0.045	-0.244
	(0.758)	(0.578)	(0.703)	(0.637)
ROA	0.291**	-1.585	0.484**	-2.630
	(0.015)	(0.101)	(0.032)	(0.116)
RETRUN	-0.017	0.078	-0.029	0.129
	(0.155)	(0.135)	(0.184)	(0.149)
SIZE	-0.122**	-0.194***	-0.216**	-0.343***
	(0.020)	(0.001)	(0.021)	(0.000)
Constant	1.146***	1.186**	1.916***	1.986**
	(0.001)	(0.013)	(0.001)	(0.014)
Year	Included	Included	Included	Included
Industry	Included	Included	Included	Included
Pseudo-R <sup>2</sup>	0.098	0.174	0.097	0.177
Obs	334	272	334	272

# **Table 6: CEWS Disclosure, Dividend Increase and Increase in Earnings**

This table presents the results of the association between firms' decision to disclose CEWS and their dividend payout separately for firms with and without an increase in earnings. *EARN\_INC* is an indicator variable that takes the value of 1 if a firm's earnings before extraordinary items increases from year t-1 to year t, and 0 otherwise. *DIV\_INC* is an indicator variable that equals 1 if a firm's dividend increases from year t-1 to year t, and 0 otherwise. *CEWS\_Disclosure* is an indicator variable that take the value of 1 if a CEWS recipient disclosed it in its annual report and/or MD&A, and takes the value of 0 if the recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it were manually collected from CEWS registry, annual reports and MD&A. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Probit	Model	Logit	Model
	EARN_INC=1	EARN_INC=0	EARN_INC=1	EARN_INC=0
VARIABLES	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure
DIV_INC	-0.130	-0.740***	-0.209	-1.239***
	(0.521)	(0.004)	(0.536)	(0.004)
BIG4	0.361	0.125	0.696*	0.233
	(0.121)	(0.628)	(0.085)	(0.609)
MTB	-0.000	0.014**	-0.000	0.028**
	(0.992)	(0.043)	(0.953)	(0.044)
EARN_VOL	0.000	0.000*	0.000	0.000*
	(0.203)	(0.082)	(0.200)	(0.079)
HHI	0.989***	-0.017	1.697***	0.102
	(0.009)	(0.962)	(0.009)	(0.876)
LEV	0.060	-0.233	0.109	-0.444
	(0.532)	(0.155)	(0.493)	(0.111)
ROA	0.467**	0.104	0.820**	0.155
	(0.043)	(0.575)	(0.035)	(0.662)
RETRUN	-0.006	-0.018	-0.008	-0.032
	(0.725)	(0.167)	(0.773)	(0.190)
SIZE	-0.163***	-0.147***	-0.285***	-0.281***
	(0.002)	(0.007)	(0.002)	(0.005)
LOSS	0.551***	-0.167	0.968***	-0.244
	(0.010)	(0.466)	(0.010)	(0.536)
Constant	0.915***	1.257***	1.490**	2.235***
	(0.008)	(0.005)	(0.012)	(0.004)
Year	Included	Included	Included	Included
Industry	Included	Included	Included	Included
Pseudo-R <sup>2</sup>	0.151	0.137	0.155	0.142
Obs	320	300	320	300

## **Table 7: CEWS Disclosure, Dividend Increase and Earnings Management**

This table presents the results of the association between firms' decision to disclose CEWS and their dividend payout separately for firms with high or low degrees of earnings management. *EM* represents the degree of upward earnings management and is calculated based on modified Jones model. *DIV\_INC* is an indicator variable that equals 1 if a firm's dividend increases from year t-1 to year t, and 0 otherwise. *CEWS\_Disclosure* is an indicator variable that take the value of 1 if a CEWS recipient disclosed it in its annual report and/or MD&A, and takes the value of 0 if the recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it are manually collected from CEWS registry, annual reports and MD&A. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Probit	Model	Logit 1	Model
	EM<0	EM>0	EM<0	EM>0
VARIABLES	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure
DIV_INC	-0.617**	-0.153	-0.991**	-0.252
	(0.012)	(0.462)	(0.017)	(0.458)
BIG4	0.043	0.386	0.064	0.741*
	(0.865)	(0.103)	(0.888)	(0.068)
MTB	-0.000	0.001	-0.000	0.002
	(0.894)	(0.478)	(0.869)	(0.478)
EARN_VOL	0.000	0.000*	0.000	0.000*
	(0.455)	(0.092)	(0.472)	(0.098)
HHI	0.824*	0.539	1.494*	0.916
	(0.054)	(0.123)	(0.055)	(0.132)
EARN_INC	-0.077	0.154	-0.163	0.263
	(0.708)	(0.397)	(0.645)	(0.392)
LEV	-0.023	-0.019	-0.029	-0.037
	(0.890)	(0.819)	(0.918)	(0.793)
ROA	0.312*	0.203	0.598*	0.339
	(0.056)	(0.286)	(0.055)	(0.276)
RETRUN	0.029	-0.013	0.086	-0.021
	(0.468)	(0.135)	(0.346)	(0.135)
SIZE	-0.131**	-0.166***	-0.231**	-0.292***
	(0.044)	(0.000)	(0.047)	(0.000)
LOSS	0.019	0.247	0.099	0.416
	(0.938)	(0.190)	(0.813)	(0.190)
Constant	1.176**	0.770**	1.968**	1.271**
	(0.016)	(0.037)	(0.022)	(0.041)
Year	Included	Included	Included	Included
Industry	Included	Included	Included	Included
Pseudo-R <sup>2</sup>	0.134	0.121	0.138	0.124
Obs	265	354	265	354

## Table 8: Test of CEWS Disclosure and Dividend Increase using 2SLS regression

This table presents the results examining the association between firms' decision to disclose CEWS and their dividend payout using the second-stage regression of an instrument variable approach where the *DIV\_INC* variable in Table 3 is instrumented with the industry average of this variable. *DIV\_INC\_hat* is the predicted likelihood of increasing dividend from the first stage regression. *CEWS\_Disclosure* is an indicator variable that take the value of 1 if a CEWS recipient disclosed it in its annual report and/or MD&A, and takes the value of 0 if the recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it were manually collected from CEWS registry, annual reports and MD&A. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)
	Probit Model	Logit Model	Probit Model	Logit Model
VARIABLES	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure	CEWS_Disclosure
DIV_INC_hat	-1.495***	-2.575***	-1.648***	-2.786***
	(0.003)	(0.003)	(0.005)	(0.005)
BIG4	0.115	0.232	0.113	0.190
	(0.495)	(0.425)	(0.563)	(0.568)
MTB	0.000	0.001	0.000	0.001
	(0.565)	(0.502)	(0.559)	(0.551)
EARN_VOL	0.000*	0.000*	-0.000	-0.000
	(0.085)	(0.099)	(0.236)	(0.251)
HHI	0.500**	0.885**	0.549	1.029
	(0.048)	(0.046)	(0.148)	(0.123)
EARN_INC	0.023	0.041	0.099	0.160
	(0.864)	(0.856)	(0.523)	(0.542)
LEV	-0.039	-0.071	-0.028	-0.040
	(0.542)	(0.526)	(0.684)	(0.738)
ROA	0.169	0.272	0.302***	0.513**
	(0.123)	(0.161)	(0.010)	(0.025)
RETRUN	-0.014*	-0.024*	-0.014	-0.024
	(0.082)	(0.072)	(0.113)	(0.105)
SIZE	-0.085**	-0.148**	-0.086*	-0.143*
	(0.048)	(0.047)	(0.079)	(0.088)
LOSS	-0.096	-0.165	0.102	0.176
	(0.604)	(0.603)	(0.635)	(0.630)
Constant	0.955***	1.587***	0.471	0.757
	(0.001)	(0.001)	(0.212)	(0.236)
Year	Included	Included	Included	Included
Industry_1digit	Included	Included		
Industry_2digit			Included	Included
Pseudo-R <sup>2</sup>	0.113	0.115	0.180	0.179
Obs	620	620	508	508

## Table 9: Qualitative or Quantitative Disclosure of CEWS and Dividend Increase

This table presents the results examining the association between firms' disclosure of CEWS details and their dividend payout. *CEWS\_Detail* equals 2 if a CEWS recipient discloses the CEWS amount received in the annual reports and/or MD&A; equals 1 if a CEWS recipient disclosed receiving CEWS without the detailed amount in its annual report and/or MD&A; and equals 0 if the CEWS recipient does not disclose it. Whether a firm is a CEWS recipient and whether they disclosed it with amounts are manually collected from CEWS registry, annual reports and MD&A. *DIV\_INC* is an indicator variable that equals 1 if a firm's dividend increases from year t-1 to year t, and 0 otherwise. All other variables are defined in the Appendix. P-values are presented in parentheses. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)
	Probit Model	Logit Model
VARIABLES	CEWS_Detail	CEWS_Detail
DIV_INC	-0.245*	-0.381*
	(0.080)	(0.098)
BIG4	0.197	0.355
	(0.175)	(0.144)
MTB	-0.001	-0.001
	(0.327)	(0.289)
EARN_VOL	0.000	0.000
	(0.459)	(0.472)
HHI	0.422*	0.632*
	(0.053)	(0.084)
EARN_INC	-0.067	-0.112
	(0.564)	(0.559)
LEV	-0.043	-0.064
	(0.483)	(0.566)
ROA	0.155	0.268
	(0.127)	(0.144)
RETRUN	-0.010	-0.017
	(0.173)	(0.178)
SIZE	-0.133***	-0.222***
	(0.000)	(0.000)
LOSS	-0.008	-0.015
	(0.952)	(0.945)
cut1	-1.197***	-1.960***
	(0.000)	(0.000)
cut2	-0.746***	-1.215***
	(0.003)	(0.004)
Year	Included	Included
Industry	Included	Included
Pseudo-R <sup>2</sup>	0.047	0.049
Obs	620	620