An event based approach for quantifying the effects of securities fraud in the IT industry

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Abstract Detecting the incidence and impact of illegal insider trading is a difficult process since access to the actual trading records of insiders that overlap precisely with fraudulent events is difficult. This paper provides a case study of a specific IT stock in Canada that was successfully prosecuted in the Canadian court system for market manipulation and illegal insider trading violations. The study provides a quantification of the impact of insider trading activities by the President directly through his own account or through accounts under his control, and illustrates the impact of some off-exchange transactions by the impugned parties. Overall, the costs of the insider trading violations are quite high, given the significant wealth effects produced by the events surrounding this case.

Keywords Insider trading · Market manipulation in IT industry · Market efficiency · Event studies

1 Introduction

A well-functioning stock market is a key mechanism for allocating society's savings to their most productive uses, i.e., it is allocationally efficient. Such a market should provide for equitable arrangements among different participants, including small and large investors, as well as between members of securities firms, investors, and corporate insiders. If corporate insiders, members of the securities firms, or large institutional investors decide to take undue advantage of the public because of imperfect competition, improper exploitation of insider information, or the dissemination of misleading information, the integrity of markets is severely undermined. Detecting the incidence and impact of illegal insider trading is a difficult process since direct access to the actual trading records of insiders is problematic for researchers. This paper provides a case study of a specific IT stock in Canada that was successfully prosecuted in the Canadian court system for market manipulation and illegal insider trading violations for which actual court data were obtained for the analyses.

Few studies to date have appeared that specifically look at the impact of illegal trading activity in the markets. This is in part is due to the difficulty in obtaining high quality data that are directly linked to trading misconduct. Early studies include Muelbrook (1992) and Fishe and Robe (2004). Bris (2005) postulates that countries with harsher laws work better at reducing the incidence of illegal insider trading. King (2009) uses event study methodology to show that illegal insider trading explains pre-bid price run-ups of Canadian firms that are subjects of takeovers. Badertscher et al. (2011) studies the market reaction to accounting restatements with informed trading. Thevenot (2012) identifies factor that affect illegal insider trading in firms with violations of GAAP. Bollen and Pool (2012) look at the risk of fraud based on suspicious patterns in hedge fund returns. In a recent paper, Karpoff Koester, Lee, and Martin (2016) (Karpoff et al.) argue that the inferences of number aforementioned studies, and many others dealing with the broader question of financial misconduct are problematic in that they are based on databases with deficiencies in the identification of: (a) initial revelation dates,

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(b) scope limitations, (c) potentially extraneous events, and (d) complete and partial data omissions the economic relevance of each feature from the standard databases employed in these studies.

The purpose of this study is to look at events pertinent to a significant case of market manipulation insider trading in Canada, which has been successfully litigated in the Canadian criminal court[1] and was the subject of the Class Action Proceedings: Léveillé -vs- Jitec Inc., now designated as Advantage Link Inc. & al.[2] (henceforth Jitec), that has only recently been recently settled (in Fall 2015). Our study is immune to the Karpoff et al. critique in that it is based on clearly identified events as obtained from the trading records of the corporation, as well as from actual court documents. We look at the impact of several events including the issuance false and misleading press releases and insider trading activities by the President directly through his own account or through accounts under his control. We focus on the class period from July 26th, 2000 to November 9th, 2000, and find that the economic impact of these violations is significant. The overall abnormal wealth estimates are robust to several alternative estimation procedures.

The organization of this paper is as follows. In the next section, some historical background of the company is provided. In Section 3, the market impact of the false or misleading press releases of Jitec will be assessed. Section 4 provides an assessment of the effects of the insider trades by the President and affiliated companies. Section 5 looks at insider benefits from off-exchange transactions of the impugned parties. The paper concludes with a summary in Section 6.

2 Background information

Jitec Inc. was created through a reverse takeover of Jitec Co., a private computer networking service company in St. Hubert, Quebec, by Altavista Mines Inc., which is a small mining company based in Boucherville, Quebec with interests in gold and base metals, in an agreement finalized on May 25, 2000.[3] Jitec used this amalgamation as a facility to go public, as per the company's listing announcement on June 19, 2000.[4] The company's shares began trading on July 26th, 2000 on the Montreal Exchange. The value of the warrant for Jitec shares under the terms of the private placement was $1.25. This private placement provided Jitec with net proceeds of 8,280,000.[5] As of July 26, 2000, the day of the listing on the Montreal Exchange, Jitec had issued 53,845,242 shares out of which 38,750,013 shares were registered in the name of its principal shareholder: the President and Chief Executive Officer. A further 13,776,000 shares were reserved for issuance in the initial listing. The purpose of the listing, as described by the company was to raise capital in order to "introduce its new "thin client" architecture or "Business Computing Advantage" service….Jitec's "Business Computing Advantage" is a service of computer management by outsourcing. Jitec installs terminals at the subscribers' location which are linked to servers at Jitec's operating centre. Basic monthly fees per terminal allow businesses to use the latest software and benefit from a global network solution without the problems associated with the upkeep of such a system, at a fraction of the normal set- up cost associated with a conventional network computer system."[6]

Jitec shares were amongst the most heavily traded shares on its first day of trading on the Montreal Exchange, and indeed during much of the class period. Over the first day of trading, 692,913 shares were traded, which represents 30% of all stocks traded (in share volume) on the exchange. Based on the offer price of $1.25, the stock closing price of $3.80 represents a startling first-day close to offer price return of 204%. The finance literature refers to a regularity observed for IPO's as *IPO underpricing.* One manifestation of this phenomenon is the existence of very high returns from the offer price to the close on the first day of trading.[7] Ritter and Welch (2002) show that IPO returns for year 2000 for a sample of 346 companies was 56.1%.Studies on Canadian IPO's show a much smaller average initial returns relative to the U.S. and other countries. Kooli and Suret (2004) show that first day returns for Canadian companies during the period 1991 to 1998 of 20.57% on average Ritter (2003) shows a summary average from other Canadian studies of 6.3% for the period 1971–1999. For new IPOs that listed in the class period alone, we have estimated a first day return over the offer price of 35.71% across firms.[8]

Over the next three trading days, the stock price continued to rise in heavy trading, fueled in part by extensive insider

[1] Cour du Québec, No: 500–61–204,220-058, July 31, 2008.

[2] See http://www.kugler-kandestin.com/areas_class_jitec.html Class Action Léveillé -vs- Jitec Inc., now designated as Advantage Link Inc. & al.

[3] Altavista's assets reported at the time of the acquisition were $6,447,000; it reported a net loss over its previous fiscal year of $1,264,000, as shown in the 2000 Crosbie Mergers & Acquisitions in Canada database. Altavista's mining assets were transferred into a new company, called Strateco Resources Inc., and the shares distributed to Altavista shareholders. Altavista shares were consolidated on a 4-for-1 basis. Altavista issued 49 million new common shares to Jitec shareholders. Jitec became a wholly-owned subsidiary of Altavista. Altavista then changed its name to Jitec Inc. Jitec's reported assets as of December 31, 1999 of $2,442,421.

[4] Canada NewsWire, June 19, 2000.

[5] See Exhibit P-93. Canada News Wire reports that the issuance of 49 million new shares

provided Jitec with net proceeds of $ 9,339,186 in additional capital. See Canada News Wire November 29, 2000.

[6] Canada NewsWire, November 29, 2000.

[7] See e.g. J. Ritter and I. Welch (2002) In their Table 1, they show that average first day returns rose from 7.4% in the 1980s to 11.2% in the early 1990s, to 18.1% in the mid 1990s, and to 65.0% in 1999 and 2000.

[8] The sample is described in section 6.2. The first day average return for the high-tech group within the sample is 39.92%. For the non high-tech group it is 18.95%.

trading by the president and no further information releases from the company since its ebullient listing announcement on June 19th and subsequent pre-listing announcements on July 20 and July 25th.[9] Using the Ritter and Welch (2002) benchmark for the IPO first day returns of 56.1% for the year 2000, the abnormal return to Jitec is 147.9%.[10] The incremental abnormal increase in market value of the IPO driven is $99,546,391, based on the 53,845,242 shares issued and outstanding.[11]

As we will show in subsequent sections, positive abnormal returns were also observed on several days after the listing and during the class period. Indeed, on August 8, 2000 they reached $10.40. At the close of trading on August 24, 2010, the share price reached its maximum during the class period of $10.90. At this price, the president's free shares from his initial allotment (excluding the additional shares that he purchased as an insider during the class period) were worth $105,593,783,[12] while the company's market capitalization reached $586,913,138. These prices did not reflect firm operational performance, however. Indeed, the firm's operational performance even deteriorated during the class period. For the third quarter ending September 30, 2000, which is embraced by the class period, the company announced revenues of $255,996 compared to $620,412 for the same period in 1999.[13] This contrasts significantly with the company's touted projections in its first pre-listing press release of June 19, 2000.[14] Jitec recorded a net loss of $842,093 for the quarter or $0.016 per share, compared to a net loss of $387,299 for the same period in fiscal year 1999. For the fiscal year ended December 31, 2000, Jitec Inc. announced a net loss of $4.8 million ($0.09 per share), compared with a net loss of $1.0 million for the previous fiscal year. Jitec's sales for year 2000 fell to $2.0 million from $3.2 million in 1999.[15] The company attributed this decline to its disposal of its IT retailing operations, and that it "took an important strategic turn," shifting its focus to coincide with its July 2000 listing on the Montreal Exchange.[16]

What drove the high stock returns when they were observed during the class period? As we will show using event study methodology in subsequent sections, economically significant returns were made on a number of days in which the company made false or misleading announcements, such as announcements of signed business contracts of considerable magnitude, as well as when there is clear evidence of stock price manipulation. The latter includes insider trades by the president and affiliated companies including trades not reported to the Commission des valeurs mobilieres du Quebec (CVMQ), as well as trades made by the president timed to ensure a high closing price for the stock. Indeed, on some days surrounding the misleading announcements, his trades in the stock accounted for a substantial portion of all trades of Jitec on the exchange. His insider purchases put abnormal upward pressure on the stock prices – these purchases were further rewarded when the stock prices rose on the release of false "good news." His insider selling, appear to represent trading on adverse information in order to avoid a greater loss also harmed shareholders by putting downward pressure in the stock price. Table 1 below lists such trades in which the president and affiliated companies accounted for at least 35% of all trades on Jitec on the exchange. After September 28, 2000, the president was primarily a seller of Jitec stock, which would have helped fuel the downward spiral of its price.

3 Market impact of false or misleading press releases of Jitec Inc.

3.1 Methodology and data

We use event study methodology to determine the market impact of the events considered under scrutiny. This approach has been widely applied in the accounting, economics and finance and law and economics literature for valuation and for tests of market efficiency. Mitchell and Netter (1994) demonstrate the use of event study methodology in securities fraud litigation, with applicability in the establishment of materiality and the estimate of damages (or disgorgement). Raghu, Woo, Mohan, and Rao (2008) use event study methododlgy to look at the effects of patent infringement litigations in the IT industry for both plaintiff and defendant firms. And King (2009) also adopts this methodology to test whether illegal

[9] Jitec's closing prices for the next three trading days were: $4.70 (July 27), $6.55 (July 28). and $8.10 (July 31). On these days, trading in Jitec represented on average 23% of all shares traded on the Montreal Exchange. More Canada News Wire, June 19, June 20, and June 25 are almost identical in content. They all make the claim that: "Jitec Inc. is a leader in the Thin-Client branch of information technology, which many industry giants regard as the new wave in information systems. This market represents a potential of $25 billion to $35 billion, and Jitec Inc. is the only company offering a global solution in this particular field."

[10] The abnormal return is defined as Jitec's first day return less the IPO Benchmark return for the year 2000: (204% -56.1%) = 147.9%.

[11] The abnormal increase in market value can be attributed to the misleading information calculated as the product of the Jitec abnormal return (Jitec Return – Benchmark IPO return for 2000) and the value of the shares prelisting (the number of shares issued multiplied by the subscription price: 247.9%*53,845,242*$1.25 = $166,852,944).

[12] The total value of Laliberté's share position that includes the free shares and the shares held in escrow at this price is $422,375,142.

[13] Canada NewsWire, November 29, 2000.

[14] Canada NewsWire, June 19, 2000: "According to company projections, revenues should start to soar in the third quarter of 2000, due to the huge potential of the niche targeted by Business Computing Advantage(TM)."

[15] Canada NewsWire, May 22, 2001.

[16] Ibid. In the company's press release on June 19, 2000, Laliberté states: "Being listed on the stock exchange will allow Jitec to maintain the technological leadership of Business Computing Advantage(TM) and rapidly complete the deployment of this new, revolutionary computer service on a national and international scale. Jitec will also enjoy greater visibility among financial institutions and investors."

Table 1 Insider trades by the president and affiliated companies that account for at least 35% of all trades of Jitec on the Exchange

Trading Day	# of trading days surrounding the misleading announcements	Trades of president and affiliations as % of total trading volume	Types of Trading
8/15/2000	5 days after press release #1 (4 days before press release #2)	46.78	only buy
8/16/2000	3 days before press release #2	51.13	only buy
9/22/2000	4 days after press release #3 (4 days before press release #4)	54.32	only buy
9/25/2000	3 days before press release #4	64.49	only buy
9/28/2000	day of press release #4	61.14	only sell
10/18/2000	day of press release #5	40.94	only sell

insider trading can explain pre-bid price run-ups of Canadian firms that are subjects of takeovers.[17]

The basic model used is the excess returns to market benchmark model, where Abnormal returns for the stock i at date t AR_{it} are calculated using the market adjusted returns:

$$AR_{it} = R_{it} - R_{mt} \tag{1}$$

where R_{it} is the daily return of Jitec at date t, and R_{mt} is the return on the market portfolio, or a matched benchmark portfolio return return at date t . This is a standard approach in the IPO literature, since pre-listing returns are not available for generating the parameters for the market model (see e.g. Ritter (2011).[18] Jitec's *Cumulative abnormal return* over the event period t1 to t2 is determined as:

$$CAR_{i,t1-t2} = \sum_{t=t1}^{t=t2} AR_{it} \tag{2}$$

The *Excess Value (EV)* created by an event, such as a press release, or an insider trade on a specific event date q is determined as:

$$EV_{\text{is}} = AR_{\text{is}} * MC_{q-1} \tag{3}$$

where MC_{q-1} is the market capitalization one day prior to the event date. In the application here, the cumulative abnormal returns over the announcement day and the subsequent day (0,+1) are used to capture the market impact, as in King (2009) to account for announcements that take place at the end of the trading day or at the close.

The press releases dates considered are: 8/8/2000 (#1), 8/21/2000 (#2), 9/18/2000 (#3), 9/28/2000(#4), 10/17/2000(#5),[19] and 11/1/2000 (#6).

Press Release #1: "Jitec signed a 105 M$ transaction with Canada Payphone Corporation" Canada NewsWire August 8, 2000. This release states "Jitec Inc. (ME:JIT) and Canada Payphone Corp. (CPC) of Burnaby B.C, partly owned by AT&T Canada, concluded an agreement for the implementation of 45,000 terminals of Jitec's Business Computing Advantage(TM) service, which will be deployed in major Canadian hotels as part of CPC's Hospitality Services agreements." In fact, as matters transpired, neither a signed agreement was put forth nor was the transaction consummated. Justice Lamontagne concluded that this press release contained false and misleading information.[20]

Press Release #2: "Jitec signe un contract avec Entourage Solutions Technologiques pour le déploiement canadien du service Avantage Informatique." Canada NewsWire, August 21, 2000. This news release refers to a signed contract that comes in the wake of the Canada Payphone contract of Press Release #2. Again, this release was ruled to contain false and misleading information.

Press Release #3: "Jitec Deploys its Service in the United States and South America" Canada NewsWire September 18, 2000. The company claims that it has concluded "the sale of four Business Computing Advantage(TM) centres to an American telecommunications consortium for Cdn $40 million. This transaction is the first phase of the deployment of Jitec's service in the United States and South America, which will take place over an eleven-month period. Jitec will also receive royalties for each user of the service, which will

[17] King (2009) shows a significant increase in the dollar value of net purchases disclosed by insiders (both directors and major shareholders) prior to the takeover announcement for the cases in which insiders are more likely to be informed about an upcoming bid. As he states: "This large increase undisclosed insider buying suggests that insiders do not fear prosecution and are trading in violation of insider trading regulations."

[18] Brown and Warner (1985) also show that the detection of significant abnormal returns is robust to the estimation method.

[19] This was an involuntary announcement in order for the firm to comply with the demand of the Exchange to provide clarification on its previous press releases. The exchange had suspended Jitec shares from trading at the open of trade on October 16th until it provided clarification on its previous press releases. Trading was not reinstated on the company's stock until October 18, 2000.

[20] Confirmed on this issue by Mr. Justice Wagner of the Superior Court on April 28, 2009, C.S.M. C.S.M. 500–36–004807-080 and 500–36–004651-082.

translate into approximately Cdn $34 million over the next five years…" Canada NewsWire, September 18, 2000. This announcement was also ruled to contain false and misleading information.

Press Release #4: September 28, 2000 "Jitec et le marché boursier." In this announcement, Jitec states that to its knowledge, there have been no important developments in its business activities that it has not already divulged, and there is no particular reason for the unusual behavior of the shares of Jitec over recent days. In this announcement, the president confirms the content of the previous press releases (#1 and #3). It would appear that this announcement was devised to stabilize the stock price which had fallen from about $10 about one week earlier to $6.25. He does not mention that on this day, the CIBC decided to sell all of its shares to cover the margin on the president's affiliated account. One could argue that if CIBC knew in advance of the date of the President's announcement which was meant to stabilize the market (which it did), this was a strategic use of the false and misleading information contained in the announcement. Given the fact of the CIBC sale of shares on this day and the market pressures that this would have induced, the market impact of the Jitec announcement per se is contaminated.[21]

Press Releases # 5: October 17, 2000. In this case, there were two concurrent announcements:

"At the request of the Montreal Exchange, Jitec Inc. (ME: JIT) and Canada Payphone Corporation (CDNX: CPY) today provided further details of a letter of intent signed by the parties on August 4, 2000. The letter of intent projected deployment of 45,000 Business Computing Advantage(TM) systems into the Hospitality market over a period of 2 years, which would generate revenues of $105M.";

"At the request of the Montreal Exchange, Jitec Inc. (ME: JIT) today provided details of the agreement announced on September 18, 2000 for the sale of four Business Computing Advantage(TM) operating centres for Cdn $40M plus royalties of a potential of Cdn $34M over five years. It should be noted that this agreement was subject to due diligence by both parties. Since the signature of the letter of intent, due diligence has been completed by both parties, and the final agreement is scheduled to be signed on or before October 31, 2000." Canada NewsWire, October 17, 2010.

These were not voluntary announcements: Jitec's shares were halted (at the open) by the Exchange on October 16th as exchange officials demanded that the company provide details concerning its earlier disclosures. Trading was reinstated by the exchange (at the open) on October 18th.

Press Release #6: November 1, 2000. This announcement states: "Jitec continues negotiations with U.S. consortium Canada NewsWire November 1, 2000. Jitec Inc. (ME: JIT) has announced that the letter of agreement between the company and the U.S. telecommunications consortium, announced on October 17, has not yet been finalized. Jitec will disclose all important information on this matter at the appropriate time…."

Clearly, the information content of this announcement is not favorable since it indicates that the firm missed its deadline of October 31st for the signing of the final agreement. One could argue that this announcement was involuntary, as it is an unavoidable response to another involuntary announcement. The press release announcing the listing of the company, on 6/19/2000 was not in the class period, but likely had an impact on the abnormal first day returns for Jitec, as shown in the previous section.

Bloomberg was used to obtain the data on Jitec's closing prices, current market capitalization and trading volume for the event studies and other analyses. The TSX-Canadian Financial Markets Research Center (CFMRC) equal weighted index is used as proxies for the market portfolio.[22]

Summary statistics of the daily closing prices, daily trading volume of Jitec and daily returns price estimated and equal weighted (CFMRC_Equal) daily returns of the market during the period in which the stock was not suspended from trading[23] from 7/27/2000 to 11/9/2000 follow in Table 2:

Table 2 shows that using the standard deviation of returns (Std.Dev.) as a measure of risk, Jitec was between 3 and 3.55 times riskier than the MSCI0IT market benchmarks. The maximum return for Jitec over the class period was 52.7%. This return was achieved on July 28, 2000, two days subsequent to the company's initial listing on the Montreal exchange. The maximum closing price of the company attained was $10.9. This occurred on August 24, 2001, three trading days subsequent to event day #2. As noted previously, the president's free shares from his initial allotment (excluding the additional shares that he purchased as an insider during the class period) were worth $105,593,782.70. The total value of the president's share position that includes the free shares and the shares held in escrow at this price is $422,375,142, and the company's market capitalization stood at $586,913,138. It

[21] Indeed, the considerable insider selling on this day, which represents trading on adverse information that is counter to the press release to avoid a further loss seems to have had a significant impact to counter the ostensible "no news is good news" content represented by this announcement. The effects of insider selling in Jitec are examined in section 5. An adverse reaction to this ostensible "no news is good news" announcement is also consistent with the "dog that did not bark" theory posited by Marin and Olivier (2008), that there is more to be learned from the absence of an action (for Jitec, it should have been the issuance of a material and truthful news announcement) than from its presence.

[22] The equal weighted index is used rather than the value weighted index as the proxy for the market portfolio, as in King (2009). During this period, the value weighted index gives a large weight to Nortel Networks, which was near its peak (trading at over $100 per share and representing about 1/3 of the TSX index). The results are very similar when one uses value weighted index as the proxy for the market portfolio.

[23] The dates that the Montreal Exchange suspended Jitec trading were October 16th and October 17th, 2000.

Table 2 Summary Statistics of stock price of Jitec, stock return of Jitec and return of Equal, and Value -Weighted MSCI0IT Portfolio Market Benchmark

	Max	Min	Mean	Median	Std.Dev.	Skewness	Kurtosis
JITEC Price	10.9	2	7.553	8.5	2.664	−0.789	-0.683
JITEC Volume	1,113,278	60,631	259,741	214,860	185,873	2.383	7.46
JITEC Return	0.527	−0.269	−0.003	0	0.113	1.379	6.575
MSCI0IT_EW	0.090	−0.073	−0.004	−0.006	0.0318	0.369	0.514
MSCI0IT_VW	0.082	−0.092	−0.001	−0.003	0.0341	0.021	−0.187

should be noted that the president purchased 15,000 shares of Jitec on the day of that announcement, an amount which represented 13% of Jitec's total trading volume on that day. The lowest closing price was $2. This nadir was reached November 9th, the last day of the class period, which is the day preceding the trading ban imposed on the president by the Commission des valeurs mobilieres du Quebec (CVMQ), based on allegations of misconduct including his neglect to submit his insider reports for the transactions executed between September 13 and October 31, 2000.[24] Fig. 1 shows a graph of daily Jitec stock prices vs. the S&P/TSX Composite Index (scaled) for the period from July 26, 2000 (when trading began on the exchange) to December 29, 2000. The broken vertical lines appear at the six different event dates.

It is evident from this graph that there was a run-up of the share price of Jitec prior to the first major announcement, which may be attributed to informational leakage and insider trading. For the second press release on August 21, there also was a pre-announcement run-up, but in this case there also was some continued momentum in the stock price due to the false press release and touting by the brokers. For example, on August 24th The President confirmed to Leduc to sell 72,800 shares to select Leduc clients at $7.50 when the market price closed at its maximum of $10.90 per share.

[24] CMVQ decision 2000-C-0692. Shareholders fortunes continued to plummet on a path that led to the extinction of the company as a publicly traded entity. On November 21st, the shares of Jitec fell to $1.38. Laliberté subsequently resigned as president CEO and director of the company and agreed to pay back $865,000 in advances that the company's board had not approved. In addition, he agreed to pay back within six months $1.2 million related to Jitec's previous retail stores' inventory and accounts. Laliberté subsequently defaulted on this agreement, as was reported by the company on March 15, 2001, when the directors requested a trading halt on the company shares. Trading resumed on June 14, 2001, and Jitec's shares closed that day at $.50. Jitec's board then approved a name change for the company to Advantage Link Inc. (Ticker symbol AVK CN, CUSIP 00762P102). On October 1st, 2001 the company's listing was changed to the Canada Venture Exchange. On March 15, 2002, with the company's shares trading at $.16 it announced that it was proceeding to sell Laliberté's block of 10,315,157 common shares. As stated by the company (CanadaNewsWire, March 18, 2002) the "proceeds of the sale will be used to acquit Mr. Benoit Laliberté's debts to the company and that to the company's knowledge, Laliberté will no longer hold any common shares in the capital stock of the company." On December 13, 2002, a Cease Trade Order was issued by the by the CVMQ due to the failure of the company to file its quarterly financial statements. On June 23, 2003, it was delisted from the Venture Exchange.

3.2 Probable impact of press releases on stock value

Panels A and B in Tables 3[25] below show the Mean Cumulative Abnormal Returns (CAR) and the Market Impact of each of the six events based on the Market model for calculating abnormal returns in the event study, using equal and value weighted MSCI0IT portfolio market benchmark, respectively. In general, the results are economically significant. They are also statistically significant at above 95% level, based on bootstrap estimation, which is performed to account for the limited sample size.

August 8th press release (event #1) The market's reaction to the false and misleading press release over the two day window consisting of the event day (August 8) and one trading later (day 0 and day +1), was economically significant. The Excess Value or Market Impact created by the press release is $99.95 (89.54) million or $1.86 (1.66) per share, based on the equal (value) weighted MSCI0IT market portfolio benchmark. It is remarkable that these estimates are not far from the value of $105 million which was the purported value of the announced Canada Payphone Contract. In other words, it is evident that the market reflected the false and misleading information almost immediately, around the announcement day. Very high abnormal returns are also observed in the five trading days prior to the release of this false and misleading information, which suggests leakage of the false and misleading information. It is clear that the president personally benefited from these transactions and his personal trades could account for some of this market reaction. Indeed, he purchased shares on the announcement day as well as on days immediately before and after the announcement. On August 1, four trading days before the announcement, for example, he purchased 46,950 shares for a total cost of $335, 520. This trade represented 14.49% of all shares of Jitec on the market. At the end of the trading day after the announcement, the gain in value of his personal portfolio of these shares is $152,760.

August 21 press release (event #2) This "Entourage Solutions" announcement relates to a further development

[25] We also use both MSCI0IT equal and value weighted portfolios and get statistically similar results.

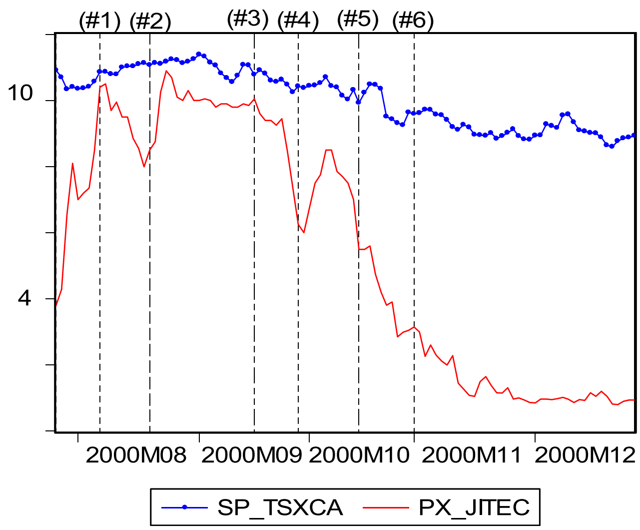

Fig. 1 Jitec Stock (PX-JITEC) vs. The SP/TSX Index (SP_TSXCA)

regarding the Canada Payphone announcement, but does not specify a dollar figure for the transaction. The market valued this transaction favorably, but more modestly than the previous announcement. As is shown in Table 3, the (0,+1) Market Impact (that includes the announcement day and the next trading day) is $ 13.65 (20.73) million, or 25 (38) cents per share, using equal and value weighted MSCI0IT benchmark, respectively (Table 4).

September 18 press release (event #3) This announcement refers to the deployment of Jitec services in the US and South America. It also specifies a contract for $40 million dollars. Using the excess return over market benchmark, for this announcement, it would be appropriate to measure the abnormal Market Impact on the announcement day (day 0): $ 25.08 (28.02) million or 47 (52) cents per share, using equal and value weighted MSCI0IT benchmark, respectively. Actually, on day September 19th (day +1) the president sold/transferred 165,000 shares of Jitec stock at $.01 per share.

Table 4 Excess return over market abnormal return and market impact[a] estimates for insider trading by Laliberté during the CLASS PERIOD

	Only Buy	Only Sell	Buy Close
AR(0)%	4.56***	−1.22**	1.18**
Market Impact ($MM)	8.73	−90.59	9.43
Usable Obs	16	18	5

[a] Market impact =[$ARi(0)^{*}\ MCi(-1)$]

September 28 press release (event #4) This announcement refers to the absence of any material reason for the recent behaviour of Jitec's share prices. It seems that if its motivation was to slow down or stem the decline in the stock prices, it failed: The Market Impact involved an estimated abnormal loss of shareholder wealth of $73.84 million of $1.37 per share using equal weighted MSCI0IT benchmark, results are similar when using value weighted benchmark. However, as mentioned above, this particular press release is contaminated. Indeed, the considerable insider selling on this day, which represents trading on adverse information that is counter to the press release to avoid a further loss seems to have had a significant impact to counter the ostensible "no news is good news" content represented by this announcement. Indeed the president and affiliates sale of 680,700 shares on this day for $2.6 million represented 61% of all trades in Jitec on that day. The effects of insider selling in Jitec are examined in section 5. An adverse reaction to this ostensible "no news is good news"

Table 3 Abnormal return and market impact estimates for press release events

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6
Panel A: Equal Weighted - MSCI0IT_EW						
AR(0) %	21.34***	3.98***	4.73***	−15.24***	−20.29***	1.79**
AR(+1) %	0.40	−0.77	−4.50***	−4.02***	−2.73***	-7.05***
CAR(0,+1) %	21.75***	3.22***	0.23	−19.26***	−23.03***	−5.27***
Market Impact (0,0) ($MM)	97.69	17.16	25.08	−60.31	−76.49	2.93
Market Impact (0,+1) ($MM)	99.95	13.65	0.72	−73.84	−84.59	-9.03
Panel B: Value Weighted - MSCI0IT_VW						
AR(0) %	17.62***	4.47***	5.28***	−13.26***	−23.56***	2.14***
AR(+1) %	1.59**	0.32	−6.63***	−1.54**	−7.37***	-7.00***
CAR(0,+1) %	19.21***	4.79***	−1.34*	−14.8***	−30.93***	−4.85***
Market Impact (0,0) ($MM)	80.64	19.26	28.02	−52.46	−88.79	3.52
Market Impact (0,+1) ($MM)	89.54	20.73	−7.84	−57.66	−110.62	−8.35

Panel A: Excess return over market abnormal return and market impact estimates for press release events for Jitec during the CLASS PERIOD, equal-weighted MSCI0IT Portfolio Market Benchmark. Here we use MSCI0IT index, excluding the index component of Nortel Networks Corp (Sedol:2,583,877) because it takes over 90% weight of the index. Panel B: excess return over market abnormal return and market impact estimates for press release events for Jitec during the CLASS PERIOD, value-weighted MSCI0IT Portfolio Market Benchmark announcement that is shown here is also consistent with the "dog that did not bark" theory of Marin and Olivier (2008), which postulates that there is more to be learned from the absence of an action than from the action itself. To avoid double counting, we do not consider this announcement again as a pure insider trading day event in Section 3.

October 17 press release (event #5) This press release is at the bequest of the Exchange, and in that sense it is involuntary, as a consequence of the Exchange's suspension from trading. The abnormal negative Market Impact of \$84.59 million or −1.57 per share.[26] This is also a period of heavy insider selling by the president, which would also be expected to artificially depress prices, and to avoid double counting, we do not consider it again as a pure insider trading day event in Section 3.

November 1 press release (event #6) This press release follows as a consequence of the previous (involuntary) press release and the company's suspension from trading. Jitec announces that it has missed the deadline for an agreement on the \$40 million "consortium" sale. The abnormal market impact on this date is a loss of \$ 2.93 (3.52) million or about 5 (6) cents per share using equal (value) weighted MSCI0IT benchmark. As in the previous press release, this is also a date of insider selling by The President, which would depress share prices. To avoid double counting, we do not consider it again as a pure insider trading day event in Section 4.

In sum, the overall Market Impact across these announcements does depend on whether they are voluntary disclosures or involuntary, and whether or not they are contaminated by other events such as CIBC sale of all of the stocks in account 3733 and insider selling by The President and his affiliated companies. The estimated abnormal Excess Valuation due to False and Misleading press releases is on the order of \$ 114.85 (99.9) million or \$2.13 (1.86) per share, using equal (value) weighted MSCI0IT benchmark.[27]

4 Effects of insider trades by the president and affiliated companies

The President himself transacted personally, through Jitec, or through his controlled accounts in the period surrounding news announcements. On August 2, 2000, exchange officials were disturbed by the extensive transactions conducted by the President and had explicitly warned him against transacting to facilitate "high closing." On August 2, 2000, the President bought a total of 62,500 shares and paid \$437,435 in total, at weighted average price of \$7.00. On October 25, 2000, The President bought a total of 15,000 shares and paid \$60,000 in total, at price of \$4. On the same day, he sold a total of 16,100 shares and paid \$61,113 in total, at weighted average price at \$3.8. This is prima facie evidence of market manipulation: to create the illusion of demand, for "noise traders" and tape watchers (as opposed to information traders) who look at trading volume as a signal of good news.

In the sentencing judgment pronounced on July 31, 2008, judge holds that the president profited from the high-tech bubble in order to tout the merits of his company and to announce rich contracts. These representations are completely unrealistic, with no commercial grounding. In order to preserve his gains, he was preoccupied with monitoring the share price and abusing investor confidence. On many occasions between July and November 2000, the president traded extensively in the shares of Jitec. Several of these transactions involved amounts that represented a considerable portion of the trades on Jitec, and had a direct impact on the pricing of Jitec shares. In this section, an assessment of the market impact of these insider dealings is provided.

In the previous section, we looked at the market impact of the misleading press releases on the abnormal returns to Jitec. We note that insider trades were conducted on and around these press releases. To avoid double counting, we report in Fig. 3 below the abnormal returns for insider (i.e. the president and his affiliates) buy only, sell only and buy at near close trades. For buy only days, we exclude a three day window surrounding the press releases in order to disentangle the effects of the Press Releases events. Since the insider trade dates are measured with precision, we focus on the actual insider trade dates returns (AR(0)).

The abnormal returns are computed using the excess return over market approach with the equal weighted CFMRC returns serving as the benchmark market portfolio. On the whole, the rates of return for the insider transactions are quite high, both in an economic and statistical sense. For purchases, the stock price is artificially boosted by about 4.56%, with a market impact of \$8.73 million. High close transactions are associated with a positive market impact amounting to \$9.43 million.

It is clear that the insider transactions of The President served to significantly impact on the market value of Jitec shares. Pure insider purchases artificially boosted the market value of the company by \$8.73 million. The Montreal Exchange's particular concern with The President's high close purchases, was well justified, as they had a market impact of \$9.43 million. Insider sales based on adverse information to avoid a further loss put downward pressure on the stock leading to a negative market impact of \$90.59 million. In sum, the damages to shareholders of insider trading in Jitec are substantial. Insider purchases gave rise to excessive prices paid by some shareholders over the class period, and would have

[26] This negative reaction is consistent with Kryzanowski's (1978) findings of a negative reaction on reinstatement of allegedly manipulated stocks in Canada.

[27] This combines the abnormal market impacts of Press Release 1 and Press Release 2.

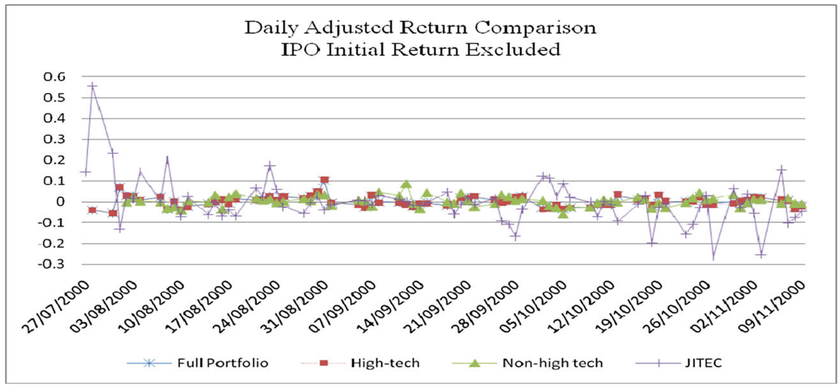

Fig. 2 Daily Adjusted Returns of the Time Weighted Portfolios of IPOs vs. Jitec during the CLASS PERIOD, 27/07/2000 to 11/9/2000

harmed existing shareholders who may have refrained from liquidating their positions on a timely basis, due to the illusory representation of the Jitec's prospects. Insider sales to avoid a further loss by The President, which accelerated during the latter part of the class period, put downward pressure on the stock leading, undercutting the positions of existing shareholders.

5 Estimation of likely trend of Jitec stock prices over the class period for investors if the company was a typical IPO during the period, but not subject to manipulation

This section estimates of the likely trend of Jitec stock prices over the class period under the following assumptions:

a) the base price of the warrant under the terms of the initial private placement (1.25) is unbiased estimate of the expected market price of Jitec shares immediately prior to the opening of the market on July 26, 2000.
b) the shares would fluctuate according to normal market trends for similar companies which were not subject to misleading and/or false press releases, touting and manipulation of stock prices through insider trades, including wash sales and matched orders during the class period.

To accomplish this task, we look at the behavior of similar "peer" IPOs that were issued during the class period as a benchmark for the performance of Jitec. In this section, the Time-weighted Portfolio (TWP) method is used in order to determine the comparable rate of returns of other firms with IPO dates during the class period. A Buy and Hold trading strategy is used to find the performance of each of the portfolios, with $1 invested in each portfolio at the beginning of the class period. We construct three TWPs, one portfolio consisting of the entire sample of IPOs, one with only Hi-Tech firms, and the one with non Hi-Tech firms. In order to construct TWP, we use daily closing prices of all the IPOs, and invest $1 in each firm on the first day its IPO is traded, i.e., invest $1 to buy at the offer price these firms. The portfolios are rebalanced each day in which a new IPO is introduced in the market, so that returns are calculated reflecting the gains (or losses) relative to the underlying investments on each day. Once the portfolios are constructed, daily returns are computed which are used in cumulating of the daily wealth positions. In sum, we use the performance of other "peer" IPO's during the period as a benchmark for the performance of Jitec.

The SDC Platinum Database is used to identify all IPOs during the class period. Information of offer prices, IPO dates, and closing prices is obtained from Bloomberg. From SDC Platinum Database, there is a total 129 offerings in US market during the class period, but since a significant number of companies changed Ticker Symbol, CUSIP, and/or other identification due to acquisition, bankruptcy, default and/or other unknown reasons, we have to reconcile discrepancies. We use only ordinary, common share offerings, and finally obtain a total number of 116 IPOs during the class period. Of the 116 IPOs, 93 (23) are designated as having Hi-Tech (Non-Hi-Tech) as their primary business. The database appears to be free of survivor bias, as that it includes firms that disappeared through time, through acquisition, as well as delisting.

Figure 2 below shows the Jitec daily adjusted return[28] and the three TWPs during the class period, excluding IPO initial returns of Jitec and the three TWPs.

It is evident that from the initial listing of Jitec until mid-September, 2000, Jitec's performance was similar to the Hi-Tech sample of IPO's. It underperformed all comparison groups firm from mid October on. In addition, Jitec shareholders were much more exposed to negative shocks for the entire class period, and was riskier.

Figure 3[29] below shows the evolution of the various portfolios over the class period and depicts the dollar value of the Cumulative Wealth of Buy and Hold trading strategy with $1 invested in each IPO on IPO dates within the full sample, with

[28] Adjusted return is the return over CFMRC equal weighted index. Results include IPO initial returns are qualitatively similar.

[29] Results include IPO initial returns are qualitatively similar so are not reported for brevity.

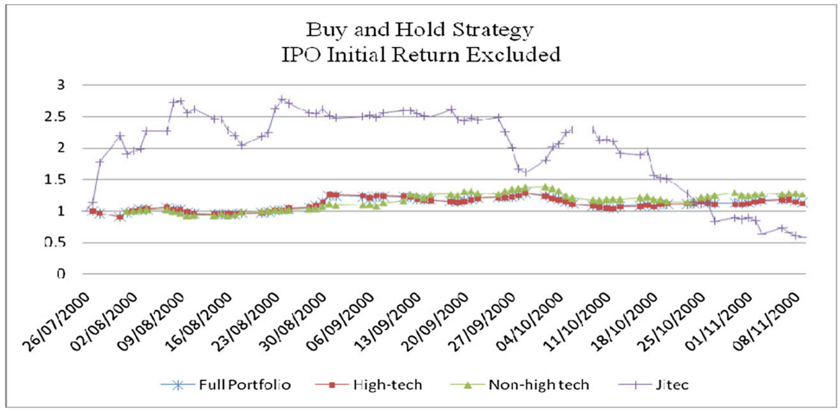

Fig. 3 Evolution of 1$ invested in benchmark IPO's vs. Jitec during the CLASS PERIOD

only Hi-tech sample, and with Non Hi-Tech sample, adjusted by equal weighted CFMRC.

From Fig. 3, it is clear that Jitec investments performed very poorly over the class period, but the argument that this was the experience of other IPO's during the same period is not supported. Benchmark IPOs had their equivalent \$1000 investments increase in value to between \$1114 and \$1270 depending on the benchmark used, when IPO initial returns are excluded. If one were to use the high-tech IPO sample as the benchmark, the value at the end of the class period of the \$1000 equivalent investment would have risen to \$1114. Similarly, an investor in Jitec that would have purchased shares on August 21 at the date of the false and misleading press release (Press Release#2) pertaining to the Entourage Solutions Contact, and held Jitec shares until the end of the class period would have experienced a loss of 73.41%. Investors in the High-Tech benchmark IPO portfolio would have experienced a gain of 14.78%.

6 Insider benefits from off exchange transactions – Subscription price guarantees to stock promoters

Several other trading violations were identified in this complex case. One example that we illustrate here is that of the President's subscription price guarantees to two stock promoters, Bassiri and Gendron. Specifically, from court documents, on October 26, 2000, Laliberté loaned 55,910 shares to Bassiri and 55,910 shares to Gendron who were committed to return the shares on July 26, 2001. This loan was guaranteed by subscription rights at \$1.25 per share (Exhibit P-38). What this means is that Bassiri and Gnedron will have the right to use these shares (including the right to give them away or to sell them on the market) until July 26, 2001. On July 26, 2001, Bassiri and Gendron would either give back the shares or \$1.25 per share (which would mean to exercise the warrant and obtain the shares at \$1.25 per share. We evaluate this warrant as a contingent claim, using the Option Pricing Model of Black and Scholes[30]:

The Black and Scholes price for the warrant, C is determined as $C = SN(d_1) - Xe^{-rt}N(d_2)$. $d_1 = \frac{Ln\left(\frac{S}{X}\right) + \left(r + \frac{\sigma^2}{2}\right)t}{\sigma\sqrt{t}}$ and $d_2 = d_1 - \sigma\sqrt{t}$, where S is the current stock price, σ is the volatility of the stock price, X is the exercise price, t is the time to maturity, and N(x) is the value of the standard cumulative normal probability evaluated at x. using the following data:

S	The current stock price on October 26: \$3.90.
σ	The daily standard deviation of returns is 11.28%, by using daily return during the CLASS PERIOD (72 observations), or 179% on an annualized basis;
r	The one year Treasury bill rate on October 26, 2000: 5.82%
t	The time to maturity is 0.75 year (nine month from Oct.26, 2000 to July 26, 2000);
X	The exercise price (subscription price) = \$1.25

Using these data, with the Black-Scholes option pricing formula, the warrant price is determined as \$3.0658. Hence, the value of the loan of the shares to Bassiri and Gendron with the subscription rights exercise price of \$1.25 is \$3.0658* 55910*2 = **\$342,817.76.** This is a benefit that no other shareholder received. On a per share basis, the value of this benefit to Bassiri and Gendron is .6 cents per share.

If stock price on July 26, 2001 is greater than \$5.15 (\$3.9 + \$1.25), Laliberté will also profit from the return of the 111,820 (=55910*2) shares.

By using the warrant to secure the loan, there might be stock dilution if Laliberté exercises the warrants at maturity day, which will in turn affect earnings per

[30] See F. Black and M. Scholes (1973), "The Pricing of Options and Corporate Liabilities," Journal of Political Economy 81, (1973), pp. 637–59.

share, and the value of shares held by the existing shareholders. In other words, this threatens the position of existing public shareholders. On the whole, the economic impact of these transactions is significant.

7 Summary

Only a few studies to date have appeared that specifically look at the impact of illegal trading activity in the markets. The difficulty in conducting such studies is in accessing to actual trading data of the parties concerned during the alleged events. This paper provides a case study of a specific stock that is exceptional in that convictions have been rendered in the Canadian court system for violations that include the issuance false and misleading press releases, insider trading activities by the president directly through his own account or through accounts under his control, and off-exchange transactions by impugned parties. Using actual court data for this case, we demonstrate the costs of informational inefficiencies to be quite high, given the significant wealth effects produced by the events surrounding this case. This case also demonstrates that the legal system moves very slowly. It took over eight years to get a criminal conviction for the parties. It took over eight years to get a criminal conviction. The judicial process is slow: the class action suit was finally settled in the Fall 2015, almost fifteen years after the troublesome events.[31]

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[31] The amount of the latter settlement was $9.85 million. See http://kklex.com/class-actions/securities-class-actions-vs-avantage-link-inc-formerly-jitec-inc-et-als/