

HIGH CLOSING

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1. Introduction

In June 2000 it became public knowledge that RT Capital (RTC) was under investigation by the Ontario Securities Commission (OSC) for manipulating the prices of a number of securities through the mechanism known as high closing, purchasing at the end of a day, month and/or quarter so that the security price ends on an up tick. An economist looking at the issue of high closing would be quite puzzled both to the nature of the high close “crime” and how it could be confirmed to have occurred. This paper explores those issues. As to the nature of the “crime,” I find that, in general, there is no material economic consequence from causing a high close so long as there are sufficient investors who act on fundamentals. Thus the crime is one that deals only with the thoughts of the agent at the time of purchasing the security. Nonetheless, even if it only deals with thought processes, one can still determine by subsequent actions if price manipulation was the intention of the purchase. In particular, I find two necessary, but not sufficient, conditions to establish that there was an intent to manipulate: first there must be motive, and second, actions such as purchase reversals. These are covered in Section 2. Section 3 applies the analysis to the RT Capital case. I find that there was neither motive nor evidence of actions that would validate the charge of illegally manipulating price through high close actions: purchases made were consistent with RTC’s mandates, and their long run performance did not impact negatively on their clients. Section 4 addresses the question why the charges were brought and the outcome of the case, while Section 5 concludes.

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2. The Economics of High Closing

The definition of a high close action is any purchase which causes the price of a security to end the trading day on an “up tick” and which does not represent a “real” demand for the security. An “up tick” means simply that the price paid on a given transaction is above that of the previous trade, or, if the price is unchanged from the previous trade, then it is the price of that transaction relative to the price that was last quoted that differs from the current trade. A “real” demand is one undertaken for investment purposes somehow defined. Now, without the qualifier that the purchase represents a real demand, the potential for causing a high close is extensive. Since there is currently always an end to the trading day, and there is around a 50% chance that the last trade in each stock is on an up tick (down tick), about half of the last trades of the day potentially represent high closes. If causing an end of day up tick in itself was illegal, then roughly half the last trades are “criminal activities.” Thus, in defining inappropriate trades everything hinges on the definition of a real demand. That is, the key issue is the *intent* for the trade rather than the action taken that defines the “crime” of high closing.

Before examining intent it is important to reflect on what would be the consequence of a high close rather than a real demand that caused a “real” up tick. Suppose that there are a number of participants who make investment decisions on fundamentals of the company. If the close does not change the bid and offer prices on the basis that the last trade was at the offer, then nothing will happen. It is a normal trade, and future trades continue as they would in the absence of the previous up tick. Suppose instead that the Designated Registered Trader (DRT) – the “market specialist” in the assigned stock – did increase her bid and offer. One of two outcomes would occur on the subsequent open. If fundamentalists now believe the price is “too high” there will be an increase in offers to sell relative to offers to buy and the price will, *cet. par.*, return to its previous bid/offer level. The other alternative is that investors believe the new bid/offer range reflects additional economic information and the bid/offer range remains through the open. But again, whether the price is higher or not, so long as others with information on the firm regard the new trading range as correct, it does not matter what the motive for the previous day’s up tick was. The future path of prices will be unaffected. In effect, so long as there are enough traders that base their decisions on fundamentals there is no subsequent real impact of an up tick that does not reflect a real demand and, if the DRT does not alter her bid/offer levels based on the up

tick, there is no real impact at any time. In other words, if other investors base their decisions on real factors and some agent causes an up tick above the firm's "true value," that agent is essentially following a policy of buying high and (ultimately) selling low: the market itself provides a corrective mechanism to drive such traders out of the investment business without the intervention of a securities regulator.¹

If the actions of a "real" up tick and a high close are virtually identical, then the definition of what action constitutes an illegal act depends solely on motivation. Leaving aside the very thorny question of whether it is an unconstitutional infringement on one's personal freedom to be charged with bad thoughts when the actions undertaken are identical with actions undertaken with "legal" thoughts, I would like to address the question of what actions might distinguish a real up tick from an ostensibly illegal high close. This revolves around what is a real demand.

To an economist, a real demand is simply a demand where the agent puts her money on the table in exchange for the item demanded. The underlying thought process is not material. As a consequence, it is best to think of high closes not in economic terms but as some legal construct. Nonetheless, the validation of such a construct *must* be linked to *some* economic action that is detrimental to some group if it is to be anything other than an arbitrary method of attacking an individual or group that, for some reason, has earned the regulators' enmity. There are two ways to proceed. The first is to establish motive and then determine if the actions undertaken that included a high close furthered that objective. This necessarily presumes that there is a victim of the crime of high closing since making a profit, per se, is not yet a crime. The second is to determine if there are any observable actions surrounding a closing up tick that might be used to distinguish a legitimate demand from an "illegal" high close.

Motive

There have been two motives that are attributed to effecting a high close. The first is that a profit can be made by misleading momentum traders into purchasing at even higher prices and then selling at the peak. The second motive is to cause an increase in demand, and fees charged, for the product of the perpetrator of the high close. The first of these is the most difficult to establish. This is because the individual purchasers who are ostensibly the victims are themselves playing exactly the same game as the agent effecting the high close. If the game is to sell to a bigger fool, then causing an up tick at the end of the day is no different from causing one at noontime. There is no reason to believe one purchase is any more misleading than any other. Indeed, if anything,

given that the subsequent open will have some ostensible “news,” this news will mitigate the impact of the previous day’s closing up tick. In effect, if the firm is playing against other momentum players, then all the players could be said to have “unreal demands,” and no single player, whether successful or not, should be singled out for punishment. And if there are players who do act on fundamentals then the market itself will provide punishment to the firm attempting to manipulate price through high closes.²

The second motive is more substantive and has the potential to be measured. Two stories have been put forward. The first is a variant on momentum trading. It presumes a significant group of investors who make their decisions almost entirely on the basis of past performance, and specifically, on the most recently recorded performance. For this group a high close may attract their money, for it suggests that, using the high close price, the rate of return is greater than it otherwise would be. There are two problems with this argument. First, the extent of the high close on the fund’s total return will, in general, be minimal and limited by the extent of the maximum bid/offer spread, which itself is set by the Exchange. As a result, to have any significant influence would require that the firm engage in an extensive program of purchasing securities to lift the offer price set by the DRT. Second, if the demand is, indeed, not based on market fundamentals, then the increase is not sustainable. If momentum investors make their investment decisions on a monthly or quarterly basis, then they could expect to move their money *away* from the high close firm in subsequent periods. After all, the strategy of high close is effectively one of buy high and sell low. Just to “break even” the next period would require another high close of equal magnitude, perpetuating the problem of buying high and selling low.³

The second mechanism by which the high close actions can increase the profits of the firm is by increasing the base upon which management fees are calculated. This is measurable. One simply takes the difference between the high close price and the previously traded price and multiplies this difference by the total number of shares owned by the firm. Applying the formula for calculating management fees to this value then gives the profits to the firm from the high close.

In effect, then, if there is a potential victim of high close actions, it is the client. Further, it is not that their agent, the portfolio manager, is manipulating price. Rather, it is that the agent is following a flawed investment strategy that will ultimately show up in lower returns. While this may warrant a civil action by the principal against his agent, or a move to an alternative manager, it does not warrant the intervention of a regulator who imposes additional costs upon the client.

Actions

Motive, while necessary, is insufficient to determine if an “unreal” demand was the reason for an end of day up tick. A real up tick could also generate an increase in fees and/or influence momentum investors. I now discuss how one might use corroborative evidence to distinguish a real up tick from a high close. To begin, it seems clear that if a purchase is made and not reversed within a reasonably short interval of time, the demand would represent a real demand under the presumption that, since there is always the opportunity to sell and it is not exercised, the firm must believe that the high close purchase represented a profitable investment. Hence they had a real demand for it. Therefore, a second necessary but, again, not sufficient condition to establish that a high close designed to manipulate price occurred, is that a purchase be reversed within a “short” interval of time. How short an interval is an open question but I would conjecture that if a position in a liquid security is not reversed within a few days, and an illiquid one within at most two or three weeks, one could strongly argue that the demand was real. But even if the purchase is reversed, that does not, *per se*, provide evidence of an illegitimate high close. First, there is the possibility of material new information that could provide a legitimate reason for such a reversal. Second, a legitimate strategy for any investment is to buy low and sell high – operationally, to buy below a reservation price and to sell above it. As a consequence, these “trading profits” can be seen as a legitimate consequence of some end of day up tick. Note that it may be possible to argue that this strategy is not inconsistent with a strategy to make profits off of momentum traders. But if it were so designed, then, as I argued before, the firm is simply playing by the same rules used by other market participants, only doing so more successfully. Success itself is not a crime.

Timing and Valuations

In addition to the necessary conditions of motive and short term ownership reversals, a third element to determine if there were an intent to manipulate price is that the timing of the high close occurs not only at the end of the trading day but that it appears inconsistent with the normal trading patterns of the firm.⁴ After all, in the normal course of business a firm *always* faces the likelihood that its purchase will be the last one of the day. As a result, statistical analysis of the frequency and daily distribution of end of day trades across firms must be treated with care.

There is a second issue related to timing. When a firm provides valuations for its clients, it – and its clients – want the most up to date information incorporated into those valuations. The equity market represents a major advantage over private securities, real estate and the like in that, when operating efficiently, it provides an almost continuous appraisal of the value of financial claims

from a variety of sources and, as a result, leads to more transparent and fairer valuation than for those claims that do not have formal markets. However, to operate efficiently requires sufficient volume to make the security liquid. This liquidity means that there are a number of agents who can assess the value of the security – provide price discovery – and market specialists who willingly set low maximum bid/offer spreads. In such markets some investment firms would like to make trades as close to the closing price as possible.⁵ Indeed, the TSE rules explicitly state that buying at close simply to obtain a closing price does not, *per se*, constitute a violation of the high close rule.⁶

However, not all securities trade under such favourable conditions and problems arise if the security is thinly traded. Yet the usefulness of a timely market determined valuation remains *a fortiori*. With fewer analysts and traders concentrating on the security, any individual buyer or seller will have a greater influence on the price of the security, including those trades that cause an end of day up tick. Now, while it is true that in such a thin market the possibility of price manipulation is increased, causing an end of day up tick again does not necessarily imply that the firm does not have a real demand. Consider, as an example, a firm wishing an up to date valuation decides to buy a security at the end of day. If this were done in a liquid market, lacking motive and future asset reversals, one would be hard pressed to even consider calling it a high close. Rather it can be seen to be a specific mechanism to get an up to date valuation of the firm and at the same time earn an expected return consistent with the investment mandate.⁷ However, by the nature of the thin market and the TSE mechanism of allowing increased maximum bid/offer spreads on thinly traded markets, the purchase may have a significant impact on the price of the security in the illiquid market such that there is a measurable increase in the value of the portfolio. But consider. Given that the same behaviour in a liquid market would be unremarkable, it is the nature of the market rather than a different objective by the firm that describes the difference in result. Both trades represent a real demand in that, to the firm, the price represents a profitable investment opportunity; both use timing decisions in order to obtain a market valuation that is timely for their clients; and both would follow the price priorities established by the Exchange.

It also turns out that the trade in the illiquid market, which may appear to be more suspect, is, in fact, more favourable to the clients of the firm, especially if the client is a defined contribution (DC) pension plan. The reason for this is that in thinly traded markets a price can deviate more significantly from its intrinsic value because of trading gaps. In high volume markets such dated information is uncommon. As a result, when funds are transferred by plan members there is

increased fairness of the transfer prices because of the more up to date information. To put this another way, with private securities a major problem is with consistent appraisals which are necessary for fairness for transfers among DC plan members. With liquid financial securities this is not a problem because markets incorporate all available information and the appraisals *are* up to date. Illiquid securities lie somewhere between private securities and those that trade in liquid markets. But, as with private securities, the firm is an integral part of the appraisal process and the market mechanism provides well defined price priority rules that insure reasonably accurate appraisals. If the plan has enough confidence to hire the manager, then it implicitly has confidence in its method of evaluating the securities, be they private or traded in illiquid markets.

3. The RT Capital Case.

With the above as a framework we can now assess the major case of high closing charges levelled by the Ontario Securities Commission against RT Capital. RTC was charged with 53 counts of high closing involving 26 different securities over the period, October 30, 1998 through March 31, 1999.⁸ Private settlements were reached with all but one of the parties.⁹ These involved a \$3 million fine to RTC, suspensions, ranging from one month to life, and/or fines on nine members of the firm, and lesser fines and/or suspensions on 12 members of the TSE who executed the alleged high close orders.¹⁰ The statement of what RTC and its employees admitted to in this case was to have allowed an up tick in the price of these securities at the end of day. While the cases have been resolved, it is still a useful exercise to determine the process by which they were, and the evidence that was presented to establish price manipulation through an up tick in equity prices. We begin by examining motive.

By the OSC's account, the end of day up ticks generated by RTC's high closings increased the value of RT's portfolios in total by roughly \$38.6 million. This on portfolios valued at around \$13.5 billion. The first issue is whether it served as an incentive to attract or retain customers. It seems clear that it did not for at least two reasons. First of all, the increase in measured return for the months in question increased the value of the portfolio by *less than* .05%.¹¹ RTC has itself been in the top quartile for Canadian fund pension managers for at least 10 years, and Larkin's portfolios, in particular, have been providing a return in excess of their benchmark, the TSE 300, of around 3% annually. The five basis points of excess return ostensibly linked to the high closing is trivial in this regard, especially given that, if the up tick was truly "artificial," the increase in

value could not be sustained without additional future high closings. The second reason is even more fundamental: The clients of RTC were restricted to institutional investors who devote considerable resources in assessing future performance of the fund managers they choose. It is extremely unlikely that, given the long term performance of RTC, they would be influenced in any way by the transitory, quarterly blips that *might* be associated with high closings. This is especially true of their pension fund clienteles that are, by their nature, focussed on the long term. To put this somewhat differently, agents for high wealth individuals are exempt from many of the purported regulatory safeguards applying to agents dealing with small investors precisely because it is assumed that their principals have every incentive, and the resources, to look after themselves. Institutional clients have resources and wealth levels that also would indicate that they too can look after themselves without the intervention of a regulator. They can and should be able to assess the management of their funds in light of their own self interest.

The second potential motive is the increase in fees due to higher valuations. RTC, for instance, uses asset values of the last and first days of the quarter to calculate the management fees. The estimate of the increase in fees from these alleged high closings comes out to less than \$9000 which is a trivial amount on the Peter Larkin and Gary Baker portfolios so that, too, does not constitute motive for undertaking price manipulation by end of quarter up ticks.

Indeed, one could ask more broadly whether the clients of RTC were hurt financially from the alleged high closings. In particular, against the presumed \$9000 in costs one would include any excess returns attributable to these security purchases.¹² Using figures from the OSC list of allegations and subsequent price data from the TSE indicate that, together, Larkin and Baker purchased \$2,680,490 worth of securities at allegedly high closes over the period Oct. 30, 1998 to Mar. 31, 1999. If they had held them for six months their value would have increased by \$366,705.70 at the close of the relevant six month periods and by \$337,666.65 if valued at the open instead of the close of those six month periods (in effect, if they had been held six months less ½ day.). Had RT capital purchased the TSE 300 index instead of the individual securities with that \$2 million plus, their profits after six months would have been \$219,218.99. Thus, RTC made a 6-month return of 13.68%, or a 6 month less ½ day return of 12.6%, versus a 6-month return of 8.18% if they had purchased the TSE300 index. In effect, the alleged high close purchases made by RTC earned their clients a *net excess return* of more than \$100,000, or more than 4% over the subsequent six months.

My purpose in bringing this out is not to say that since, *ex post*, there was no victim of the alleged high closes by RT Capital, therefore there was no “crime.” That aspect goes to the question of sentencing and the penalties to be imposed. Rather, I want to strongly suggest that the actions of RTC in the capital markets appear fully consistent with both their mandates and their normal, excellent, portfolio performance, a performance that they could not sustain if they were indeed following a policy of high close price manipulation for any sustained period of time. That is, RTC’s results strongly suggest that no crime of price manipulation through high closing was ever committed.

What about the possibility that non-clients were adversely affected by the end of day up ticks made by RTC? As explained before, if RTC attempted to mislead momentum players by their purchases, it is not especially relevant that their purchases were at the end of day. Nonetheless one might argue that, in the absence of a reversal of a stock purchase, if there were a systematic short term increase in prices of those securities under consideration, that *might* indicate RTC acted as a momentum investor and perhaps induced other momentum players to overextend themselves. Rather than rigorously examine this proposition statistically, it suffices to note that half of the alleged high close purchases closed lower one month later. In effect, if RT Capital was attempting to lead a bandwagon, they were notably unsuccessful at it. Indeed, combined with the very significant excess returns over the 6-month interval, it suggests that RTC’s investment strategy was to invest for the longer term, and that they were especially successful in choosing out-of-favour securities well in advance of their competitors.

Lacking a motive is sufficient to argue that the end of day up ticks caused by RTC did not constitute an intention to manipulate price and further indicates that there were no victims *even if* RTC did, indeed, harbour inappropriate thoughts.¹³ Nonetheless, for completeness, it would be assumed that the investigators in the case would address the issue of position reversals to confirm that there was *some* evidence that would suggest that the demands were not real demands. There is no such evidence presented in the public record indicating whether or not there were any position reversals. Given the importance of such evidence in establishing guilt or innocence, it suggests that there was no evidence supporting the prosecution’s case.¹⁴

This leaves the question of timing. There are two issues: first, why were the high closings located at the end of month and second, why were they at the end of day? That they were at the end of the day could easily result from normal business trading. After all, with a portfolio of more than

\$13 billion in Canadian equities, RTC was one of the largest asset managers in the country. Column 5 of the appendix indicates the average number of trades per day for those securities alleged to have had high closings during the period October 1998, through December 1999. More than two thirds of the trades for which I have data were in securities that traded an average of less than twice an hour. It seems unexceptional that RTC should be involved in some of those end of day trades. As for end of month trades, a not unreasonable response is to address the nature of the cash flows at RTC. Because their clients are generally firms with fixed salary schedules, and contributions are linked to those salary payments, one should expect an uneven cash flow over the month with peaks at end of week and end of month. Given also that most of the funds managed are valued monthly rather than weekly, that too will mean most of the cash purchases will be at end of month. The monthly valuations provide at least two reasons why the month end purchases appear at end of day. One of those *could be* to generate high closes to extract some rents from its clients, but as we have argued before, in the case of RTC and its clients, such an economic interpretation is bizarre.¹⁵ The second explanation is to obtain a closing price with the most up to date information. As indicated in endnote 6, doing so is an *accepted* action for end of day trading provided “the person executing the trade or giving the order does not have a direct or indirect interest in closing the security at a higher or lower price.” The problem is that in thin markets on the TSE doing so will, in fact, alter price, and one can *always* argue that, *for real demands or unreal ones*, the person giving the order *has* a direct interest in the price of the trade. If not, then why trade at that price? The agent is, in effect, caught in a catch 22: they wish a market price, but in obtaining it, they influence it in a manner that can *always* be interpreted as one of generating an up (or down) tick, and, as such, be in violation of the rule against price manipulation. Indeed, it can be even more damning than that. For some very thinly traded securities, the agent placing the order may be the one with the best and most up to date information, and, in determining the securities closing price, may use this information to “move the market.” In the absence of any real commitment of the designated registered trader to “orderly markets,” reasonably narrow maximum bid/offer spreads, and extended time intervals between trades, it may appear that the order was meant to manipulate price, whereas it in fact is meant to bring the price *into line* with fundamentals – it, in fact, represents the *best* of the price discovery process given the disinterest and/or abilities of the DRT.

What the fundamentals are, of course, is a particularly thorny question. It is the price in the market: but that is only valid in a very liquid market. In the absence of that liquidity, there must be a great deal of second guessing on the part of the regulators to even imagine that the action was

not done for real investment purposes. Put another way, the charge of high closing presumes a liquid market – where it is irrelevant. It is only potentially relevant in illiquid markets, but laying the charge requires the regulators to hold some view as to what the fundamentals are. If they and/or the DRT are unwilling to put up money on their beliefs, they are likely to be far less capable than are those traders willing to invest in the security in assessing the true value of the security.

Two cases bring this out clearly, Multibank and Veritas Energy. Both these securities derive their value from other heavily traded securities: Multibank represented a claim on Canadian bank equities that were held in fixed proportions – its intrinsic value was essentially determined by the prices of those bank securities.¹⁶ Veritas was a former Canadian energy company that had been purchased by an American firm and whose shares traded on both the NASDAQ (with some volume) and the TSE (with light volume). Over the period Oct. 1, 1998 through December 30, 1999 the transactions volume of Multibank on the TSE was approximately once every two weeks while that of Veritas was roughly once a month. Larkin was quite open in indicating that his purchases were intended to move the price of these two securities closer to their intrinsic value as determined by the trading in the more liquid alternative markets. If anything, RTC “high closes” were meant *to replicate* the more adequate price discovery process in the liquid markets rather than manipulate price for some nefarious purpose. Because the Multibank purchases constituted *more than 40% of the ostensible increase in portfolio value* associated with the high close charges, in effect nearly half of the charges of high closing were because the OSC using the incorrect concept of the market.¹⁷ Second, it was also the case that, with Veritas, at the end of the three months subsequent to the charge of high closing on Veritas, RTC’s actions actually *decreased* the value of the security rather than increased it. This information was available to the OSC but they did not report it.

From the evidence on profits, the use of a broader market concept for very illiquid stocks, and the willingness to decrease the portfolio value (in the case of Veritas) it would appear that the equity demands were real and that RTC, not the Exchange or the regulators, had the fundamentals correct. Indeed, in the statement of the final settlement the only violation of the securities laws put forward was a failure to properly supervise. But supervise what? There were, in fact, no charges related to high closing, to fraud, or to price manipulation. Rather, the only market actions of which members of RTC were “guilty” were being in the wrong place at the wrong time, viz., making the last purchase (*or* attempted sale) of the day in 53 instances such that the trade was

recorded as an up tick! This turns the Toronto Stock Exchange into a game of musical chairs where the last one standing is to be financially and/or professionally destroyed! It can hardly increase the confidence of either domestic or foreign investors in that institution.

4. Why?

There are at least three puzzling questions regarding high closes and the RTC case that I have not yet addressed. First, why should there be any regulation imposed by the TSE on such practices? Second, why did the OSC pursue the RTC case as vigorously as it did, even to the extent of effectively altering policy regarding the level of penalties for such alleged practices? Third, why did the Royal Bank choose not to strongly contest the charges against its subsidiary, RT Capital?

To an economist it is disheartening to see that an institution which is supposed to epitomise the concept of a free and open market should have so little confidence in the market itself. Presumably the TSE is concerned about orderly markets and believes that the more tools it has in its regulatory arsenal, the more likely it is to achieve that objective¹⁸. But the TSE has control over the maximum bid/offer spreads as well as a variety of mechanisms available to handle order imbalances, both of which make the high close regulation redundant. What it does not appear to have is a strong commitment by DRTs for some securities to accept responsibility for maintaining order in their assigned markets¹⁹. Insistence by the exchange that the DRT be responsible for orderly markets would better meet the objectives of the Exchange and would vitiate the need to impose, directly or indirectly, sanctions or blame on nonmembers for the illiquidity of some TSE securities.²⁰

The second puzzle is why the OSC so vigorously prosecuted the RTC case. Given the lack of solid evidence and the lack of victims, one means of addressing this question uses the theory of bureaus, which has been successfully applied in the past to a Canadian regulatory body.²¹ According to this hypothesis, the objective of the bureau (and the bureaucrats in it) is not to achieve some social objective, but rather it is to maximize its prestige and insure self preservation. Certainly the OSC was labouring under a tarnished reputation prior to the RTC case²² and, if nothing else, that case certainly enhanced their reputation among the press and general public²³. Furthermore, the OSC is currently being merged with the Financial Services Commission of Ontario (FSCO). If members of the OSC are to increase, or even maintain, their power in the new

organization it would help to establish their expertise and/or reputation in some areas that were not under their former mandate. Retirement savings plans, particularly defined contribution plans, are an area where both the former FSCO and OSC shared jurisdiction, the former as the regulator of pension plans and the latter as regulator for many of the instruments used in group and individual RRSPs. That a significant majority of RT Capital's clients were pension funds would certainly make RTC an attractive target if the OSC wished to enhance its credentials in a turf war with the former FSCO.

There is also a second possible explanation for the vigorous prosecution of the RTC case. Just prior to the alleged high closes, there was a reorganization of the OSC, the upshot of which was that the OSC was to become self financing. In effect, the fines collected from security violations have effectively become a part of the operating income of the OSC itself.²⁴ With such a financial structure the bureau will tend to have an incentive to target firms with "deep pockets" and press the case more strongly than they would have done without that incentive. Royal, as the largest bank in Canada, certainly could have been viewed as an institution with very deep pockets.²⁵

The third puzzle is why the Royal Bank did not more strongly contest the regulatory attack on its subsidiary. One economic explanation is that, while the unit represented a highly profitable part of the bank's business, it still represented only a small portion of the bank's overall profit. In particular, it represents a smaller share of the bank resources than other branches such as mutual funds and the securities business that are under the regulatory scrutiny of the OSC. Further, the Royal Bank had been deeply embarrassed by the political process that led to the rejection of their merger plans with the Bank of Montreal. As such, the Royal probably did not want the glare of publicity that was engendered by the press "frenzy" accompanying the RTC case. It is also now known that the Royal was engaged in the \$1.5 billion acquisition of the US securities firm, Dain Rauscher, and, given their inability to navigate the political environment with their merger attempt, the RTC case certainly must have raised fears that their ability to consummate their acquisition could be put at risk. One can perhaps understand that, from an overall business point of view, the bank would decide to make the RTC case disappear as quickly as possible, as opposed to a long and public litigation process²⁶.

While the remarks in this section may be viewed as plausible economic interpretations on some aspects of the RT Capital high close case, it must be stressed that there is, at present, little publicly available information with which to confirm or reject these conjectures. This is primarily

because most of the evidence involved in this case has not been made public and the individuals involved are unable to speak publicly on the particulars of the case and the terms of its out-of-court settlement. This case, in particular, is one where a full judicial hearing would have had a great deal of merit to assist the public in determining the nature of the “crime” and the evidence used to assess guilt or innocence. Unfortunately, if my conjectures are correct, it is in neither the OSC’s nor the Royal Bank’s interests to permit a full airing of the issues.

5. Concluding remarks

In this paper I have argued that an agent who attempts to manipulate prices through a policy of high closes is effectively pursuing an investment strategy of buying high and (ultimately) selling low. As such there is little, if any, negative impact on other market participants and no regulatory necessity to control such actions: the market itself imposes the penalty for such a strategy. That high closing is a “crime” suggests that what is being prosecuted is a thought process and not an action with negative social consequences. I have further argued that if regulators persist in treating it as a crime, then necessary, but not sufficient, conditions to indicate that an agent is attempting to manipulate price are that there is both motive and subsequent actions such as purchase reversals. Simply looking at the timing of the trades will be misleading not only because of cash flow issues but also because of the socially acceptable use of end of day trades to obtain up to date price information.

Applying the analysis to the RT Capital high close case, I find no material evidence regarding motive or subsequent actions to suggest price manipulation to the detriment of either RTC’s clients or the market in general. Indeed, the alleged high closings represented a portfolio whose return over the subsequent six months significantly exceeded the mandate to RTC’s clients. Further, the Multibank and Veritas cases, involving more than 40% of the alleged increase in portfolio value that the OSC attributed to high closings, represented, in my view, an inappropriate concept of the relevant market by the OSC. In other words I have argued not only that the public evidence *does not support* the charge of price manipulation through high closing, but also that the evidence *does support* the view that RT Capital was following the same best - and legitimate - business practices that attracted its clients in the first place.

If one accepts the view of this paper, then the fact that the OSC could so misinterpret both the

nature of the charges and be so ill informed on the economics of the issue is disconcerting. Not only did they not look for and/or report potentially corroborative evidence of asset purchase reversals, they did not understand the implications of subsequent price movements, and, in one case, even charged a member of RTC with a high close for *attempting to sell* a security instead of purchasing it.²⁷ One should expect better of financial regulators. A regulatory environment that appears both arbitrary and irrational is unlikely to enhance the international stature of our capital markets. In my view, the prosecution of the high close case against RT Capital would appear to be just such an arbitrary and irrational regulatory excess: The available evidence is, at best, inconclusive, the apparent trial by press was prejudicial to a fair hearing, and the penalties imposed were out of all proportion to the alleged acts and historical precedent. It strikes me, and others, that a review of this case and the excesses connected to it would be called for. Not only would it serve to restrain regulatory excesses in the future but perhaps it would also lead to justice for those individuals whose reputations and livelihoods were destroyed in this case.

APPENDIX

NAME	NUMBER OF "HIGH CLOSE" TRADES	AVERAGE PREMIUM PAID	TOTAL INCREASE IN RTC PORTFOLIO VALUE	AVERAGE # OF DAILY TRADES Oct.1998- Dec.1999
ARBOUR	3	0.0707	1191688	3.172
BRACKNELL	1	0.0455	591902	13.100
CELANESE	1	0.0096	235945	28.685
CORBY'S	1	0.0018	95600	2.608
DESJARDINS	1	0.0278	626700	2.264
DIA MET A	7	0.0327	5002605	6.854
DUNDEE	1	0.0286	134390	NA
ENCAL	1	0.0654	1614235	23.315
GUARDIAN	2	0.0278	383000	3.217
LEITCH	1	0.0119	390720	111.653
MACKENZIE	1	0	0	234.146
MULTIBANK	6	0.0949	15434850	0.121
NELVANA	1	0.0088	138400	4.570
PACIFICA	2	0.0108	301340	NA
PARAMOUNT	4	0.0289	5193625	18.660
REGIONAL	5	0.0327	2614787	5.720
RIGEL	4	0.0156	2188661	28.252
ROTHMANS	1	0	0	2.637
SOFTKEY	2	0.0165	872480	4.729
SUPERIOR	1	0.0064	64090	63.430
TECSYN	1	0.0294	184260	11.494
TEMBEC	1	0.0104	187200	48.576
TLC LASER	1	0.0420	716100	177.567
UNITED	2	0.0252	310279	7.863
VERITAS	1	0	0	0.041
VIDEOTRON	1	0.0110	89423	27.242

Sources: Schedule A and B of Statement of Allegations of Staff of the Ontario Securities Commission was used to determine Cols. 1-4. Col. 5 was calculated from TSE statistics.

Endnotes

1. An alternative assumption about the market is that it is dominated by “momentum traders”, i.e. where market decisions are made primarily on the basis of past price movements. Such a market is quite difficult to characterize: there is nothing to really tie down the price of a security. Nor is there any reason to believe that a regulatory regime would wish to encourage the continued participation of investors of this sort. Further, in such a market, high close behaviour is unlikely to have any effect on momentum traders. For one thing much of the activity of momentum trading is linked to the recent growth of day trading on the internet where trading is pretty much confined to *intra day* momentum plays. End of day trades tempered by the next day’s opening auction should have minimal momentum implications. Second, momentum traders appear to confine themselves to actively traded securities. If a firm is intent on manipulating a stock’s price through high closings, it likely would restrict its activity to infrequently traded securities to maximize its influence on the price. Third, so long as price priorities are maintained, any influence on prices by high closes can only occur if the DRT alters the bid/offer levels, and the Exchange itself sets the rules on how great this spread can be. In liquid securities this spread is quite narrow. Finally, in influencing momentum traders, a real, end of day up tick will have qualitatively the same effect as a high close intended to manipulate price: momentum traders, almost by definition base their actions on the path of prices, not the reason or motivation for the ups and downs.
2. If one truly believed that high closing was prevalent, the investment strategy of buying shares or calls at mid-month and selling out the position at the close of the month would prove to be profitable.
3. One could argue that, in following a policy of high closes, the firm should concentrate on purchasing undervalued securities. But if the firm is capable of making *that* distinction, the real question to ask is why they did not purchase more of those securities and truly increase the attractiveness of their fund!
4. For instance if the firm’s cash flows come at the turn of the month, then one should expect more end of day trades at end of month rather than, say, mid-month.
5. Index funds for instance, can reduce basis risk and reduce unintended transfers among policy holders by such timing.
6. “. . . If the only purpose of the trade is to obtain the closing price, whatever it may be, and the person executing the trade or giving the order does not have a direct or indirect interest in closing the security at a higher or lower price, the trade will not be in violation of this ruling. . . ” From a notice to members of the Toronto Stock Exchange dated May 14, 1999, from Leonard Petrillo, vice-president, corporate affairs.
7. If that price was judged to be too high, the agent would enter a sale instead of a purchase.
8. See the appendix for some information on the alleged high close securities. The average per trade alleged high close was less than 3.5% above the previous trade price and all purchases were

made at the best available offer price: that is, at or below the offer price set by the DRT.

9. One broker has refused to settle and that case is proceeding to court.

10. In addition the respondents were required “to cover the costs of the investigation and hearing in the sum of approximately \$150,000.” See

[Http://www.osc.gov.on.ca/en/Enforcement/Decisions/REAS_rtcapital_20000720](http://www.osc.gov.on.ca/en/Enforcement/Decisions/REAS_rtcapital_20000720).

11. For the portfolios run by Baker, the increase was 2 basis points; for those run by Larkin it was under 5 basis points.

12. While this would be inappropriate for any given security, the 26 securities may represent a sufficiently diversified portfolio with which to conduct such an exercise.

13. Again I want to stress that this is not to condone a crime if, *ex post*, the alleged victims did not suffer. Rather it is to stress that there is good reason to believe that *no crime – of thought or action – occurred* because RTC was following the same best business practices and mandates that attracted their clients in the first place.

14. The alternative hypothesis is that the investigators lacked sufficient economic knowledge and did not even look for evidence of this sort.

15. However, one can generate any sort of non-economic reason one’s fancy suggests beginning with vanity, but without an intended victim or subsequent actions the point is moot. Much of investment strategy is idiosyncratic. When choosing a portfolio manager one looks at the expected *total* performance and takes the bad with the good.

16. This firm was scheduled to close down in March 2000, at which point each shareholder would receive their *pro rata* share of the portfolio or the cash equivalent.

17. The OSC attributes \$15,434,850 of the \$38,562,278 gross increase in portfolio value from high closings to the 6 Multibank transactions. It should also be pointed out that when there were securities jointly listed on the Toronto and Montreal exchanges, dealers were required to obtain the best price of the two listings and, if a Montreal trade occurred outside the buy sell spread in Toronto, the client be compensated. In effect the regulations *required* traders to do what RTC was effectively charged with doing in the Multibank case.

18. But see Corcoran, T., “In defence of high closing,” *National Post*, July 8, 2000.

19. In any case, it is in the interest of the DRT to capitalize on any actions of high closes – most of us would be overjoyed to bet against a player who buys high and sells low. Thus self interest improves the DRT’s profits *and* provides an orderly market.

20. An alternative hypothesis that has been suggested is that, in the face of increasing competition from other exchanges, the one rationale remaining for the TSE is the that it can enforce Canadian

regulations. A high profile case such as RTC reinforces the visibility of such a role. I have been unable to find a single case where the U.S. SEC ever prosecuted a case analogous to high closing.

21. See Chant, J. F., and K. Atcheson, "The Choice of Monetary Instruments and the Theory of Bureaucracy," *Public Choice*, Fall, 1971.

22. Bre-X, Livent, and YGM come to mind.

23. Apparently bank bashing remains a great Canadian spectator sport.

24. This is not quite how the legislation had been drafted. Part VII (Securities Act) of the 1997 Provincial budget legislation S.O. 1997 c. 10, ss. 3.4 (2) states that "The Commission shall pay into the Consolidated Revenue Fund money received by it as a payment to settle enforcement proceedings commenced by the Commission but no money received by the Commission,

(a) to reimburse it for costs incurred or to be incurred by it; or

(b) that is designated under the terms of the settlement for allocation to or for the benefit of third parties."

These two exceptions have pretty much emasculated the good intentions to remove "entrepreneurial" behaviour on the part of the OSC. In the RTC case, the \$3 million fine paid by Royal Bank was designated "to be used for the benefit of investors in Ontario" (Item (b), above). This meant that the funds were allocated to the new, OSC created, Foundation for Investor Education. In announcing the creation of this foundation, OSC Chair David Brown stated: "It is time to broaden the scope of securities regulation and specify a mandate for investor education". See

http://www.osc.gov.on.ca/en/About/News/NewsReleases/foundationinvestored_20000410.html.

25. If \$9000 is regarded as sufficient to induce individuals with heretofore unblemished records to attempt to pervert financial markets, consider the effect that \$3 million might have on individuals able to pervert the course of justice! I would hasten to add that in no way am I suggesting that the OSC is guilty of the legal equivalent of extortion. Rather, it is important to put things in a proper perspective. For instance, suppose, if only for an instant, that lawyers and bureaucrats had the same black sense of humour purported to exist among economists and financial practitioners, and just suppose that an e-mail (or a recorded phone conversation) between two OSC members contained the remark that "thanks to Royal's deep pockets, there should be money enough for significant raises next year." If such information became public (for instance, was leaked to the press), could those individuals convince the public and/or an oversight committee that what was said was said in jest. Would they be disbarred? Should they be disbarred? Proper perspective is indeed important.

26. It might also not have appeared fruitful to pursue the case in circumstances where the OSC acts as prosecutor, judge, and jury.

27. Softkey, December 31, 1998.