

# ***Paramax Solutions Inc.***

Secretary of the Commission,  
Ontario Securities Commission,  
20 Queen Street West,  
Toronto, Ontario  
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## **Subject: Maple Proposal and Application**

Thank you for the opportunity to comment on the questions and issues that arise from the Maple proposal to acquire the TMX Group (TMX) , Alpha Trading Systems Limited Partnership (Alpha) and The Canadian Depository for Securities Ltd.(CDS).

Paramax Solutions is a private corporation that provides services to many of the securities operations of banks, broker/dealers and custodians in Canada. Paramax has over twenty clients in Canada including all of the largest Canadian broker/dealers. The principals of Paramax each have more than twenty years experience in clearing, settlement and depository systems and service in Canada. In addition they have consulted for Securities Settlement Systems (SSS), Central Securities Depositories (CSD), Central Counterparties (together known as Financial Market Infrastructure (FMI)) as well as stock exchanges, central banks, governments, securities regulators, the International Finance Corp, the World Bank, the Asian Development Bank, the Arab Development Bank and the United Nations in over twenty-five markets in North America, Europe, Africa, the Middle East, Asia and South America. One of the Paramax principals was the author of the first IOSCO paper on clearing and settlement (Clearing and Settlement for Emerging Markets).

Since our expertise does not extend to trading, our comments will be limited to implications of the Maple proposal on the clearing, settlement and depository aspects of the proposal. We have provided responses to questions 18 through 42 since these were focused on the clearing/settlement/depository aspects of the Maple proposal.

As a preliminary comment, we believe the Commission should ultimately allow the Maple group to acquire CDS, if the owners of CDS wish to sell. The owners of CDS should have the right to sell their company. However, we suggest that the safety and efficiency of the Canadian markets would benefit from key regulatory changes and requirements to address the potential negative side-effects of converting the current not-for-profit model of CDS into a Maple/CDCC/CDS for-profit monopoly in Canadian clearing/settlement. We have outlined below several changes that could enhance the safety and efficiency of the Canadian marketplace if a Maple/CDCC/CDS for profit monopoly becomes a reality.

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Typically there would be at least two ways of constraining the pricing/profit/behaviour power of a for-profit monopoly such as Maple/CDS. One would be to require regulatory oversight on prices and other practices; the second would be to create an environment that encourages competition. We will focus on the latter of these two options. The efficiency of clearing and settlement in Canada, as well as ensuring continued innovation, should be two key factors considered in assessing the Maple/CDCC/CDS proposal to create a for-profit monopoly.

Monopolies (both not-for-profit and for-profit) are not typically known for their efficiency or innovation. There are many companies in Canada that are part of the clearing/settlement services landscape. Paramax is one of many infrastructure players that provide clearing and settlement systems and services. While Paramax is not a Financial Market Infrastructure (FMI) we play a significant role in the efficient clearing and settlement of transactions in Canada. Paramax, and other companies, have been responsible for many innovative solutions to support clearing and settlement in Canada, particularly the increased use of Straight-through-Processing (STP). Canada has one of the highest STP rates in the world because of innovative solutions provided by both CDS and companies such as Paramax. Clearly Paramax has a business interest in ensuring it can continue to provide the solutions it has developed over the past 10 years. But the market as a whole will also benefit if Paramax, and companies like ours, can continue to provide these, and newer, solutions without being constrained by any monopolistic behaviour on the part of Maple/CDCC/CDS.

CDS already has a monopoly position in providing FMI services for the equity, debt and money markets in Canada. The Maple proposal would not change this. What Maple would do is change from a not-for-profit model into a for-profit model.

FMI's are an economy of scale business; as transaction volumes increase, unit costs decrease, approximately, in proportion to the volume increases. While some of the cost decreases over the years at CDS may have come from efficiency gains and new services, the vast majority of the transaction cost decreases have resulted from market volume increases, that CDS was not itself responsible for, and from CDS' ability to keep its costs more or less constant while still supporting the increased volumes. A Maple/CDCC/CDS for-profit monopoly does not have to increase prices to make a profit. All they have to do is not continue the annual price decreases that CDS has implemented as volumes have increased. For the Maple/CDCC/CDS shareholders, this will be a good (and certain) benefit. For the marketplace as a whole, this will result in significant cost increases relative to other markets – particularly the USA.

The Maple proposal makes specific reference to emulating the Deutsche Bourse group's vertically integrated model. While this may be positive for other, reasons, it is somewhat troubling from a purely clearing/settlement point of view, since the Deutsche Bourse's FMI subsidiary (Clearstream) charges between 500 and 1000 percent more than CDS for the same services. There is no major difference between the service/systems provided by CDS and Clearstream that would account for this cost difference, other than CDS is

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currently a not-for-profit utility and Clearstream is a for-profit company. The equivalent costs in the US are less than 50% of CDS' costs – reflecting the much larger economies of scale that are available in the USA. Regulators should consider carefully the impact of the Canadian FMI costs moving toward the Clearstream scale (500-1000 percent increase) while the equivalent costs in the US continue to decrease year after year. In the current regulatory framework, the lower costs in the USA do NOT provide any restraint on the Maple/CDCC/CDS costs since it is not possible, currently, for market participants in Canada to clear/settle their trades anywhere other than CDS. And it is also not currently possible for a Canadian broker/dealer to direct their trading activity to a market with lower clearing/settlement costs because the best execution rule(s) considers only the price of the security being traded, not the overall costs of trading and clearing and settling the transaction. With for-profit clearing/settlement infra-structure in Canada it is possible that an investor could have lower overall costs of buying or selling a security by having their trades executed at a higher price but in a market with substantially lower clearing/settlement costs. Increased clearing costs could also alter the current mix of self clearing and correspondent clearing participants. Increased clearing and settlement costs will ultimately be passed on to investors.

**Question 18: What are the implications of the vertical integration of TSX and CDS, the monopoly clearing agency, to the capital markets, market participants and the provision of depository, clearing and settlement services? Please explain both positive and negative implications for Canada.**

There are likely to be some cost savings through the combination of administrative functions between the TMX and CDS. Some rationalization of data processing facilities between CDS and TMX has already taken place so these will not be repeated. The requirements of trading platforms and FMI systems are completely different so there is no opportunity to “merge” these systems. The major negative implication is likely to be significantly increased clearing/settlement costs. The Maple proposal itself uses the Deutsche Bourse as a model for them to emulate. The reality is that the Deutsche Bourse is very profitable, in large part because it owns a for-profit, monopoly in FMI services that charges between 500 to 1000 percent more than CDS currently does for the same services. Approximately 50% the Deutsche Bourse revenues come from the FMI side of the business.

**Question 19: Is the answer to question 18 above affected by the fact that the TSX currently has a dominant position in the market for trading systems? Please explain.**

No. The TMX' dominant position in trading is not a factor. What is a factor is that in the current world, the market participants that trade on the TMX or any trading platform have no choice as to where they may clear and settle their trades. There was no need for that choice when CDS was a not-for-profit entity so the issue has never really been considered. But with Maple/CDCC/CDS being a for-profit entity, it will be important for those trading on an exchange or ATS to be able to choose where (which of several competing suppliers) they wish to clear their trades.

**Question 20: Do you have any concerns with the move from a horizontal model of clearing to a vertical model of clearing? If so, please explain the issues and how they may be addressed through appropriate regulatory measures or why the concerns could not be mitigated.**

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If the “vertical” model were a not-for-profit, industry owned utility there would not be a concern. The “vertical” or “horizontal” structure is irrelevant. What is relevant is that the current arrangements whereby there is no choice in providers of clearing/settlement services pre-supposed a not-for-profit, industry owned utility. Once that changes to a for-profit monopoly, it is imperative that market participants be allowed to choose where to direct their clearing/settlement business.

**Question 21: Is there a concern that the interests of unaffiliated marketplaces may not be taken into account? If so, are the mechanisms proposed by Maple adequate to address the concern? If not, what other mechanisms could be put in place?**

Yes, there should be a concern. Any for-profit company has a duty to maximize its profits. Most companies are constrained through competitive pressures. But the Maple/CDCC/CDS monopoly will, at least initially, have no constraints from competition unless changes to existing rules (e.g. best execution) and new rules are implemented.

**Question 22: If you are of the view that unaffiliated marketplaces should be represented on Clearing Boards, what is the appropriate percentage representation? What should the nomination process be to ensure that different unaffiliated marketplaces are well represented on the Clearing Boards?**

The board representation of unaffiliated marketplaces will not be sufficient. A board member will not be able to prevent discriminatory pricing or other practices. Initially regulation, and eventually the presence of alternative clearing/settlement providers, will provide those constraints on the Maple/CDCC/CDS monopoly. The regulators should implement similar provisions in Canada to the “Interoperability” rules that the SEC in the United States implemented when DTC and Thompson Financial merged their OTC clearing services to form OMGEO.

**Question 23: What are your views on the user-owned and the non-user owned model for clearing agencies, including the pros and cons of each model?**

For Canada, the issue is not so much user-owned vs. non-user owned. Both models can work. The issue for Canada is our proximity to the US which operates a user-owned, not-for-profit model for clearing/settlement. Regulators should carefully consider the implications of moving our markets in the opposite direction of the US markets.

**Question 24: What criteria should be used to determine which model would be more appropriate for our capital markets?**

Cost is the major consideration. Because clearing/settlement is a volume-sensitive business, the Canadian clearing/settlement costs are already at least double those of our nearest competitor (the USA). A further increase in that cost gap will not be good for Canada. It is possible that high volume, low size trading will become unprofitable in Canada and migrate to the US.

**Question 25: In your view, is one model preferable for our capital markets and why? If you believe that both models could work for Canada, please explain.**

The proximity to the US is the major factor. If the US had a for-profit clearing/settlement model, there is no doubt Canada would have also moved in that direction. But the US is

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not moving to the for-profit model so Canada's move in the opposite direction is a concern. Either model could work with increased competition in the provision of clearing/settlement services and appropriate constraints on the Maple/CDCC/CDS monopoly's ability to increase prices relative to our major US competitors.

**Question 26: Are there concerns related to the divergence of the interests of the users of CDS services and the interests of the owners of CDS and Maple? Why?**

There are many opportunities, especially in securities clearing and settlement, for a monopoly to make increased profits by perpetuating inefficiencies. But increased competition should provide the appropriate constraint on those opportunities.

**Question 27: Are requirements ensuring a minimum number of directors representing users on Clearing Boards effective to ensure that CDS services are appropriately designed and operated to meet the needs of users? If so, what would be the appropriate number of user representatives?**

While board members can play a role in bringing to the board's attention the perspective of their particular user group, it will be very difficult for an individual board member to affect change in the Maple/CDCC/CDS monopoly on behalf of its user-constituents. Initially regulation, and eventually competition, will be effective in bringing about the desired outcome. Ultimately it will be the ability of market participants to choose from amongst several providers of clearing/settlement services that will achieve the efficiencies and low costs that the market is seeking.

**Question 28: Is the definition of independent director under the Maple Proposal appropriate? If not, how should an independent director be defined and why?**

No comment.

**Question 29: What is the optimal composition of CDS' board and why?**

No comment

**Question 30: Are there other measures that should be considered to ensure that CDS services are appropriately designed and operated to meet the needs of market participants and the industry generally?**

YES. To allow for the continued innovation in the clearing and settlement space by companies outside of Maple/CDCC/CDS and to encourage the development of competition to Maple/CDCC/CDS, the regulators should consider the following measures:

- i) Interoperability rules similar to those imposed by the SEC to allow the creation of the Omega near-monopoly in the USA. These would include prohibiting all FMI providers from using unreasonable technical or interface "Standards" requirements to prevent access to their systems by a competitor; and would prohibit all FMI's from charging discriminatory prices to competitors for access to their systems.

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- ii) Regulators should prohibit FMI's from charging unreasonable "access" fees and establishing unreasonable technical impediments to both competing FMI's and to other non FMI's that provide clearing/settlement systems and services.
- iii) All FMI's in Canada, including Maple/CDS, should be required to provide "link" accounts, at no cost, to the other regulated FMI's for the purpose of providing a seamless and transparent interface for the market participants who choose to use competing FMI providers. There should be no cost or technical impediment that prevents or discourages a market participant from using a FMI provider that competes with Maple/CDCC/CDS. It should cost no more, and be no more difficult, for a user of a competing FMI to clear/settle a trade with a Maple/CDCC/CDS user as it is to clear/settle a trade between two Maple/CDCC/CDS participants. These sorts of link account arrangements have been in place before in Canada; specifically when Canada previously had two FMIs (West Canada Clearing and CDS). And since the vast majority of OTC derivatives executed by Canadians have a non-Canadian counterparty, it will be necessary for this sort of link account arrangement to be in place between Maple/CDCC/CDS and foreign FMIs for the efficient processing of OTC derivatives. The same arrangement should be in place for domestic FMI providers.
- iv) All exchanges/ATS' should be required to allow their clients to direct the trades executed on the exchange/ATS to the clearing provider of their choice. CDS itself made this suggestion to the regulators in their comments on the proposed LSE merger with the TMX.
- v) The Maple proposal should not prevent the members of its group from investing in the future in competing clearing/settlement operations. The owners of Alpha developed it as an alternative to the TMX trading monopoly and were considered successful at decreasing trading costs as a result. The Canadian market would benefit from the same sort of competition for FMI services and should be encouraged, not prohibited by non-compete arrangements. In Europe, where for profit, "vertically integrated" exchanges/FMI have been a reality for some time, steps are being taken to increase competition. As recently as Oct 2011, the Bank of England commented on the need for competition when exchanges become the owners of FMI's ( Speech at the European Commission Conference on European Post Trading Landscape by Paul Tucker, Deputy Governor Financial Stability, Bank of England, Oct 24, 2011)

**Question 31: What are the implications of a for-profit CDS to the capital markets, market participants and for the provision of clearing and settlement services? Please describe both positive and negative implications; in particular, any implications for capital market developments, innovation, costs of clearing and settlement services, risk management or other areas affecting the public interest.**

There may be some positive impacts of a for-profit Maple/CDCC/CDS:

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- i) In the past, regulators and public-policy authorities have indicated their reluctance to approve a take-over of the clearing and settlement infrastructure by a foreign-owned entity. In this sense, the inclusion of CDS in Maple may effectively prevent any foreign takeover of the group as whole and ensure Canadian ownership of both trading and clearing/settlement.
- ii) There will be some costs savings from the combination of administrative functions at the TMX and CDS.
- iii) There are likely to be some “synergies” from the combination of CDS and CDCC, although these are likely to be limited. CDCC deals exclusively in the processing of trades that were executed on an exchange, while CDS processes trades from both an exchange and OTC market.
- iv) There may be some benefits to participants from the combination of CDCC and CDS in terms of reduction in collateral requirements, although again these are likely to be very limited.

The negative impacts will be increased clearing/settlement costs to the market as a whole and, depending on the behaviour of Maple/CDS, a reduction in innovation. Increased costs from a monopoly is nothing unique to Maple/CDCC/CDS; it is the nature of a for-profit monopoly to maximize its profits, in part, through its monopoly power. And for-profit monopolies are not generally known to be innovators. Innovation in Canadian clearing/settlement has come mostly from Canada’s proximity to the US. For example, Central Counterparties (CCP’s) are currently the rage in clearing/settlement, mostly due to their real and perceived risk reduction benefits. CDS, as a not for profit utility, has been a CCP longer than any other market except the US. CDS acted as a CCP 20 years before they existed in European markets, despite the fact that the clearing/settlement infrastructure in Europe has been dominated by for-profit monopolies. Canada started in the CCP business because the US clearing/settlement infrastructure (a not-for-profit utility) started a CCP. Whereas the European for-profit clearing/settlement companies resisted the use of CCP’s for decades.

**Question 32: Are the measures proposed by Maple adequate to address the conflicts that may arise, or are there other measures or specific requirements that are needed?**

See the suggestions under the response to Question 30

**Question 33: What are your views on the additional measures outlined above? Should any other measures be considered, and if so, why?**

See the suggestions under the response to Question 30

**Question 34: Are the measures proposed by Maple sufficient to prevent anti-competitive or monopolistic pricing? If not, what other measures should be put in place?**

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No. There will need to be regulatory oversight of the pricing and access practices of Maple/CDCC/CDS and measures taken to encourage competition to provide a market-based restraint on Maple/CDCC/CDS.

**Question 35: Is increased fee regulation by the Commission warranted and, if so, what specific measures should be adopted and why?**

Initially, yes unless competition for the Maple/CDCC/CDS for-profit monopoly develops quickly, in which case there would less, if any, need for regulation of fees. The major effort should be to establish a simple benchmark with which to measure the “cost” of clearing/settlement in Canada. The overall costs of clearing/settlement in Canada will certainly increase with the Maple/CDCC/CDS proposal. The issue is by how much does it increase and are these increased costs justified for the gains achieved by the Maple/CDCC/CDS combination

It can be difficult to determine what the actual costs of clearing and settlement are to the market and to compare costs across markets. Each market uses different pricing tariffs and places more/or less emphasis on certain costs depending on local conditions, existing or potential competition etc. Some services are provided for free, while other costs are not part of the FMI’s pricing at all.

For example, CDS often quotes its exchange trade fee when comparing prices to other markets because CDS has lowered that particular fee relatively more than any of its other fees. Many for-profit FMI’s in Europe require their clients to use the SWIFT network to connect to the FMI and these costs do not appear in the FMI’s own fee schedule, whereas DTC and CDS both run private networks that are very cost effective for their participants and the fees for those networks do appear in the DTC/CDS fee schedule.

As a not-for-profit utility, CDS has typically rebated 10-20% of its revenue back to its participants – effectively reducing its participant’s costs by 10-20% from the published fees. Even a simple commitment to “not increase current prices”, without a similar commitment to continue the past practice of rebates, would mean an immediate 10-20% increase in clearing/settlement costs in Canada.

The issue is not whether the clearing/settlement costs will increase – they will certainly increase. The question is by how much will those costs increase and are the increased costs worth it. To know that, it will be necessary to have a clear picture of how much the costs have increased and how these compare, relatively, to other markets. A simple benchmark is to calculate an “all-in” trade price. This would be to take the net revenue (net of rebates) of the FMI and divide it by the number of trades processed in a given year. This eliminates all of the differences in pricing methodologies and takes into account rebates or the retention of rebates.

A comparison of this all-in price would show that Canada currently has one of the lowest all-in clearing costs in the world – certainly many multiples lower than any for-profit FMI. What will be useful for regulators and public policy makers is to understand how much this all-in clearing cost changes with the Maple/CDCC/CDS proposal.



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**Question 36: Are the current fair access requirements sufficient to mitigate any fair access concerns that arise with dealer-ownership of an exchange and non-user ownership of a clearing agency? Are additional requirements required? If additional measures are required, please provide examples.**

It would be in the commercial interests of a for-profit Maple/CDCC/CDS to broaden access rather than restrict it so access is not likely to be a problem.

**Question 37: Are there concerns with access to clearing and settlement services by unaffiliated marketplaces? If so, what measures could be put in place to address the concerns?**

Certainly the regulators would have to ensure that any ATS was able to have their trades processed by the Maple/CDCC/CDS monopoly. On the one hand, it would be in Maple/CDCC/CDS' commercial interest to provide that service to all ATS'. On the other hand, artificial barriers to access would benefit the trading side of Maple.

**Question 38: What are the benefits and costs of integrating CDS and CDCC?**

There are likely to be some cost savings from the combination of CDCC and CDS although these are likely to be limited to administrative costs. The vast majority of CDS' systems, and the complexity of systems, come from the OTC processing (client/custodial activity; debt and money markets), and from depository and entitlement processing, none of which exist within CDCC.

There may be some benefits to participants from the combination of CDCC and CDS in terms of reduction in collateral requirements, although again these are likely to be very limited. The calculation of collateral requirements for an FMI is complex and the mix or portfolio of securities used in the calculations is just one factor. Other factors, such as who shares risk with who, typically play a much larger role in determining collateral requirements. And it is quite common for a given market participant or group of participants to willingly give up any benefit of cross-margining in order to avoid risk sharing with certain participants or groups of participants. Cross margining between CDCC and CDS is already possible through a cross-margining agreement but has not been pursued by the market participants. The CME and DTCC in the US have had such cross-margining agreements in place for over a decade.

**Question 39: Would you support the integration of CDS and CDCC and why? If so, what, in your view, would be the optimal degree of integration?**

Yes. There are some, limited, cost savings from a merged CDCC and CDS. Many of the benefits could be achieved without the merger but in a small market such as Canada, it is always better to avoid the costs of duplication, even if they are small.

**Question 40: What would the impact of integration be to market participants?**

The integration of CDCC and CDS in and of itself is likely to have a minor impact on market participants. The move from not-for-profit CDS to the for-profit model is what will cause the major impact, not the merger itself. There could also be major impacts/costs to the market participants if the rationalization of CDCC/CDS systems results in significant changes for the market participants' own systems (e.g. changes to interface standards, technologies etc)

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**Question 41:** In addition to the specific issues identified above, do you have any concerns with the changes in market structure that the Maple Proposal introduces? If so, please provide examples of issues not already identified and whether the concerns can be mitigated by some of the measures already mentioned or others.

No additional comments

**Question 42:** Do you believe it would be useful to require Maple to perform regular international benchmarking of its operations? In answering, please explain why you believe it would or would not be useful.

Yes. See the "all-in" price benchmarking suggestion in the comments to question#35

We would like to reiterate that we believe the Maple group should be allowed to acquire CDS as long as appropriate measures are taken to prohibit the resulting for-profit monopoly from abusing its monopoly position. And we suggest that new measures are needed to ensure the safety and efficiency of the Canadian securities markets and to encourage the development of competition that would ultimately result in new clearing/settlement alternatives in Canada.

Sincerely,



Gary Stephenson,  
Director,  
Paramax Solutions Inc.