# NERA

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## Memo

To:         Jennifer Hambleton and Jovana Nedeljkov, MinterEllisonRuddWatts

Date:       8 April 2024

From:       Will Taylor, Jono Henderson and Asahi Koizumi

Subject:    **ATC/Serato: Issues raised in the SOI**

## 1.      Introduction

1.  We refer to the Statement of Issues published by the Commerce Commission on 7 February 2024. The purpose of this memorandum is to comment on the following matters:

    A.  The conditions under which it would be profitable for ATC to "cash-out" earnout in the sale and purchase agreement (SPA) early so that the protections cease to apply (which will then allow a foreclosure strategy to be implemented);

    B.  The potential dynamic impacts of a foreclosure strategy on market size;

    C.  The NZCC's position that our critical diversion analysis overstates software margins, given that many lite users do not upgrade to pro and that users who do not upgrade to pro strongly value Serato Lite and are foreclosable; and

    D.  The implications of the NZCC's statement that foreclosed customers will continue to use their existing hardware till the end of its life, and thus do not have to incur extra financial costs to switch if their hardware is foreclosed.
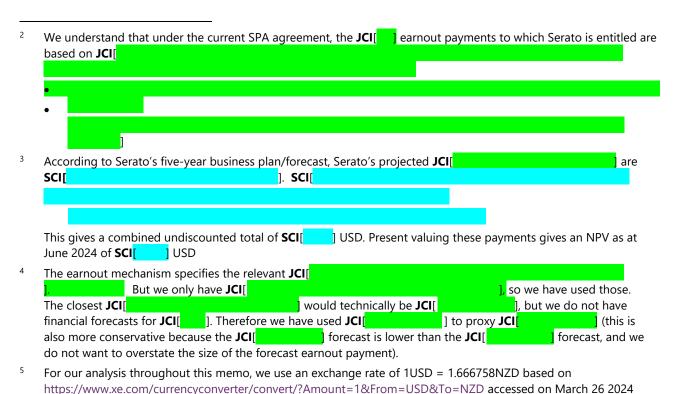
## 2.      "Cashing out" the SPA

2.  The SPA includes protections for the seller, which require Serato to be operated as a standalone profit maximising business until the ▮▮▮▮**JCI**[▮▮▮▮].  It is thus likely that any foreclosure strategy, were ATC to implement, would not occur until 2029.

3.  In the SOI the NZCC has posited that ATC and Serato's shareholders could negotiate away the SPA protections:[1]

    *We are still considering whether [...] the Parties could elect in future to amend these clauses or waive the need for ATC to comply with its contractual obligations*

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[1] Para 43.2 of SOI.

4. The SPA includes **JCI**[    ] earn out payments[2] which Serato expects to be reasonably substantial. Indeed, we understand that the earn out provisions were included to bridge the gap between ATC's valuation and Serato's valuation.  Given implementing a foreclosure strategy would reduce the value of Serato by adversely impacting its **JCI**[      ] and thus the earn out payments, the sellers would only agree to amend the SPA if they were compensated for the lost value they would otherwise expect in the absence of a foreclosure strategy. This would likely take the form of ATC offering a lump sum payment to "cash out" the earn out provisions, so the earn out regime, including the associated protections, would cease to apply.

5. This then raises the question of how having to make a payment to "cash out" the earn out regime, and the SPA protections, would impact ATC's incentives to foreclose.

6.  Based on forecasts in Serato's business plan, it is expected that ATC will have to pay Serato  at least **SCI**[                           ] or the present value equivalent which is **SCI**[           ] [    ] upfront if they want to cash out the SPA.

7. Given Serato valued itself at **SCI**[     ] USD and ATC paid 65m USD up front, ATC had the option to pay an additional **SCI**[   ] USD upfront for the freedom to implement a foreclosure strategy, but instead chose to pay less and be subject to the SPA provisions.

8. Our incentive analysis to date has been on a per customer basis. Given any early cash out of the SPA protections would be an upfront fixed cost, we can conduct an aggregate analysis of the required diversion for foreclosure to be profitable. Cashing out the SPA will be profitable if the sales diverted to ATC as a result of the foreclosure outweighs the sum of the payment made to the seller and the profits lost due to the foreclosure.

9. That is to say, we have implemented an aggregate and multi-period calculation critical diversion calculation which covers the period during which the SPA protections apply. In this model, the costs of implementing a foreclosure strategy are:

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[2]  We understand that under the current SPA agreement, the **JCI**[   ] earnout payments to which Serato is entitled are based on **JCI**[

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[3]  According to Serato's five-year business plan/forecast, Serato's projected **JCI**[                         ] are **SCI**[                          ].  **SCI**[

This gives a combined undiscounted total of **SCI**[     ] USD. Present valuing these payments gives an NPV as at June 2024 of **SCI**[    ] USD

[4]  The earnout mechanism specifies the relevant **JCI**[
].          But we only have **JCI**[                        ], so we have used those. The closest **JCI**[                      ] would technically be **JCI**[           ], but we do not have financial forecasts for **JCI**[    ]. Therefore we have used **JCI**[          ] to proxy **JCI**[          ] (this is also more conservative because the **JCI**[        ] forecast is lower than the **JCI**[        ] forecast, and we do not want to overstate the size of the forecast earnout payment).

[5]  For our analysis throughout this memo, we use an exchange rate of 1USD = 1.666758NZD based on https://www.xe.com/currencyconverter/convert/?Amount=1&From=USD&To=NZD accessed on March 26 2024

    A. The up front cash-out payment

    B. Aggregate lost hardware royalty fees on non-ATC hardware

    C. Aggregate lost software revenue from Serato users of non-ATC hardware

10. And the benefits are:

    A. Cumulative hardware margins from customers that divert to an ATC controller or all-in-one device; and

    B. Cumulative software revenue from customers that divert to an ATC controller or all-in-one device.

11. The time period over which we assess the incentive is the period during which the SPA protections apply, which is through to the end of December 2028.[6] We start the modeling in June 2024, which is when the transaction is anticipated to complete (subject to regulatory approvals) and so it would be the first opportunity for foreclosure to take place. All costs and benefits have been discounted using ATC's WACC of **ATCCI[ ]**.

12. In order to perform this aggregated calculation, we need estimates of the non-ATC hardware sales to users of Serato (as these are the sales that could theoretically be diverted and thus are the "addressable market" for a foreclosure strategy), as well as estimates of lost hardware royalty fees and software revenues. Note that we assume the recaptured users are users of controllers and all-in-ones (in line with the NZCC's market definition) but that the merged entity would likely forfeit royalty fees and software revenues across all non-ATC hardware products (including players, mixers, etc.).[7]

13. The table below sets out our approach to each of the inputs to aggregated critical diversion calculation.

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[6] For cashing-out the SPA protections to be worthwhile, it would need to be NPV positive during the period which they would otherwise apply, as any benefits of foreclosing after this time would in theory occur in the absence of cashing out the SPA protections.

[7] We have tested our final results with the lost royalties and software revenue confined to only all-in-ones and controllers and we found that this does not materially affect the results.

## Table 1: Inputs to cumulative critical diversion calculation

| Input | Approach taken |
|---|---|
| *Costs of foreclosure* | |
| Foregone hardware royalties | Based on Serato's business plan, we know Serato's expected monthly hardware royalty revenue and software revenue over the SPA period.[8] We also know that in 2023, **SCI**[ ] of revenue generated from new Serato compatible hardware[9] sold was non-ATC. We apply this proportion to Serato's forecast hardware royalties (i.e. assume the proportion is constant going forward) to estimate forecast non-ATC hardware royalty fees. In present value terms, this gives a value of NZD **SCI**[ ]. |
| Forgone software revenue | Similar to the hardware royalty fee, we take Serato's total forecast software revenue and apply a constant proportion to this over the SPA period to get the software revenue associated with non-ATC customers. The proportion used is **SCI**[ ], which is the proportion of Serato users in 2023 who were using their software on a non-ATC hardware. In present value terms, this gives a value of NZD **SCI**[ ]. |
| Cash-out | NPV of expected earnout payments based on forecasts in Serato business plan. We have discounted this using ATC's WACC of **ATCCI**[ ], given Serato doesn't have a WACC it uses internally. |
| *Benefits of foreclosure* | |
| Diverted hardware margins | **Volume**: Serato's business plan has separate forecasts of "pro" and "lite" hardware,[10] which feed into its estimates of hardware royalties. For each type, we assume that the proportion of units sold that is non-ATC over the SPA period is the same as it is currently.[11] This is the estimated number of units that ATC can potentially recapture.

**Margin**: We then multiply these volumes by ATC's average hardware margins for each hardware type to estimate the profit ATC could |

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[8] We only have software revenue and hardware royalty fee forecasts up to March 2028. To extend this to go to **JCI**[ ], for the hardware royalty fee we have multiplied the year on year growth rate (which is consistent across the forecast period) by the revenue from the previous year's same month. For the software revenue we did not have any growth rates we could apply so we have conservatively assumed that the monthly software revenue earned between **JCI**[ ] equals that of the previous year's same month.

[9] We define a product as "Serato compatible" if Serato receives a hardware royalty fee from the hardware provider.

[10] "Pro" hardware is refers to hardware that has been integrated with Serato DJ and features a "plug and play" licence for Serato DJ Pro. This means that when such hardware is connected to a laptop where Serato DJ Pro is installed, it automatically activates the full version of the software. This eliminates the need for users to purchase a separate subscription or perpetual license for Serato DJ Pro. Typically, more expensive hardware includes a Pro "plug and play" licence. On the other hand, "Lite" hardware operates similarly but only grants access to Serato DJ Lite. Since Serato DJ Lite is already available for free, purchasing Lite hardware ensures compatibility with the Serato DJ ecosystem and offers the option to upgrade to Pro through subscription or the purchase of a perpetual license.

[11] In our analysis we only consider all-in-one and DJ controllers as the relevant product types to align with the Commerce Commission's definition of the relevant hardware market. Therefore the percentage applied for example to Serato Pro hardware is estimated as: $\frac{Serato\ Pro\ compatible\ Non-ATC\ all-in-one\ and\ DJ\ controllers\ sold\ in\ 2023}{Total\ Serato\ Pro\ hardware\ sold\ in\ 2023}$ (and the same for the Lite hardware).

potentially recapture. This value is then multiplied by the diversion ratio (**R**) to estimate the actual profit ATC will recapture.

| | |
|---|---|
| Treatment of non-ATC Serato users on a Lite enabled hardware | A key sensitivity that affects the required diversion is the percentage of Serato Lite enabled non-ATC hardware users that can be foreclosed. As discussed in Section 4, a material number of Serato Lite users drop-off without upgrading within a year of signing up (approx. **SCI**[          ] in our estimate) and so are not relevant to any foreclosure analysis. To account for this, we run sensitivities for the proportion of Lite users that cannot be recaptured/aren't forecloseable. This involves scaling the volumes of Serato Lite users of non-ATC hardware calculated in the previous step by a percentage between 0 and 100% and then recalculating the diversion ratio (**R**) at which foreclosure is profitable. A drop-off rate of **SCI**[          ] would imply that **SCI**[          ] is an appropriate value for this scalar, but we present the full 0-100% range. |
| Diverted software margins | Multiply the percentage of Serato users that used a non-ATC controller or all-in-one in 2023 (**SCI**[          ])[12] by the forecast monthly Serato software revenue to give the software revenue that ATC can potentially recapture. This is then multiplied by the diversion ratio (**R**) to this to estimate the revenue ATC recaptures. |

14. Using these values, we can estimate the total cost of foreclosure as of June 2024 as **SCI**[          ] using a discount rate of **ATCCI**[     ] per annum[13].

15. To estimate the minimum diversion ratio (**R**) that results in the ATC's total gains from foreclosure exceeding the total cost, we set up an equation that equates the total cost of foreclosure and total gains from foreclosure and solves for **R**.  The figure below shows the required diversion ratio for different levels of non-ATC Serato Lite users drop off rates and also includes a scenario where all-in-ones are assumed to not be forecloseable.

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[12] The data we have on subscriber usage did not differentiate the users by product type and thus we have calculated the percentage of total non-ATC Serato compatible hardware sold that was either a controller or all-in-one (which yields SCI[     ]) and have applied this to the SCI[     ] which we know is the % of Serato users that used their software on a non-ATC hardware. The calculus of this results in SCI[          ].

[13] **ATCCI**[                                                                                              ]

**Figure 1:**

Source: NERA analysis of ATC and Serato data.

16. The figure above shows that:

    A. If all lite hardware and all-in-on sales are foreclosable, the critical diversion ratio would still need to be ~73%;

    B. As the drop-off rate of Lite users increases, the number of foreclosable Serato Lite users falls, making it more difficult for ATC to recapture enough sales to make the foreclosure strategy profitable.

    C. The estimated % of foreclosable Lite users based on Serato data from 2023 is **SCI**[      ]% and at this rate, ATC will have to recapture around **SCI**[                              ].

    D. If all-in-ones are not forecloseable, the critical diversion ratio is above 100%, even if all lite hardware sales can be foreclosed, which in the present context means there are not enough remaining hardware sales that can be foreclosed in order for foreclosure to be profitable.

17. Therefore, this analysis suggests that ATC would have limited incentive to pay out the sellers early to remove the SPA protections to allow foreclosure, based on the Serato's current

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[14] The area between the dashed lines SCI[        ] are the % of Lite users that are estimated to be foreclosable based on Serato data. The methodology and data used for estimating this range is explained in Section 4 of this report

forecasts.[15] We also understand from Serato that **SCI**[⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛ ⬛⬛⬛⬛ ]

# 3.   Considering dynamic impacts of foreclosure

18. At [111] of the SOI, the NZCC identifies two static and relatively short-term effects of foreclosure:

> *"[T]he merged entity would lose profits from selling fewer Serato software licences to rival DJ hardware providers; but the merged entity would gain profits from all those customers that switched from buying a controller from rival DJ hardware providers to purchasing an ATC controller."*

19. The NZCC's analysis of foreclosure incentives appears to have been focused on the trade off between these two effects (as has ours to date). However, this ignores the dynamic implications of employing such a strategy.

20. Foreclosing hardware rivals would lessen competition in the DJ hardware market. However, Serato benefits from a competitive DJ hardware market as it generates more DJs that may ultimately become a Serato subscriber. Serato has advised us that innovations in the DJ hardware market (such as motorised MIDI platters that mimic the feel of vinyl on traditional turntables, small format controllers targeted at bedroom DJs, or the development of an all-in-one-DJ sets that do not require a laptop) not only attracts new DJs (i.e. grows the market) but also encourages existing DJs to upgrade their setups, driving continuous growth in the software market.

21. Critical diversion analysis can, indirectly, accommodate this consideration because critical diversion is agnostic to market size. Even if the number of total users reduces (e.g. because of market leakage), the same ratio applies. It tests:

> *"For every 100 users that would otherwise use Serato with third-party hardware (absent foreclosure), how many must instead use Serato with ATC hardware (post foreclosure) in order for total sales gained to outweigh total sales foregone?"*

22. But any discussion of actual diversion must account for dynamic impacts on the size of the market as a result of foreclosure. A less competitive DJ hardware market may inhibit growth in the hardware and software markets (or even shrink it) post-foreclosure which will then require the merged entity to effectively recapture a bigger share of the remaining markets (relative to the counterfactual markets) for the foreclosure to be profitable, since some customers no longer exist. As an illustrative example, if there are 100 customers in the counterfactual and 80 in the factual as a result of less innovation, a critical diversion ratio of 50% would imply that 50 customers need to be recaptured. However, given 20 customers have already been lost, those 50 customers would need to be recaptured from the remaining 80 customers. Thus the critical diversion, accounting for market leakages as result of reduced innovation, would be 50/80 = 62.5%.

23. It is also possible that a foreclosure strategy could have flow-on effects in other markets (e.g. by damaging the merged entity's reputation more broadly) that would dampen its incentive to foreclose. For example, Serato is trying to grow in the music production market through its

product Serato Studio and currently, the most paired hardware with its software is a **SCI**[⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛⬛]. The merged entity foreclosing its DJ hardware rivals may cause these rivals to retaliate on the music production side, or may generally worsen Serato's reputation among music production software customers, causing them to switch away. This is particularly the case if there is overlap between between DJ and music production customers. As inMusic set out in its 12 December cross-submission, music production software is "a multi-billion dollar industry" while the DJ software market is "likely closer to $100 million" – accordingly, there is much more scope for the merged entity to face consequences on the music production side than there is for them to benefit on the DJ side.[16]

# 4.      Drop-off of Serato Lite users

24. At [116], [117], and [120.1] of the SOI, the NZCC writes:

> *"Our view is that [NERA's critical diversion] estimates may overestimate the critical diversion ratios. NERA's approach for most parts of the model seem reasonable. However, our view is that the expected margins for DJ software that the model uses are overstated. For example, we consider that the expected margins should take into account that some buyers of DJ hardware will not purchase a subscription to Serato Pro but will only use Serato DJ Lite.*
>
> *Taking this into account reduces the estimated critical diversion ratio, the extent of which depends on the proportion of Serato DJ Lite customers that upgrade to Serato Pro. We believe that **SCI**[⬛⬛⬛ ⬛⬛⬛] proportion would be likely to do so. This means the critical diversion ratios for products that only come with Serato DJ Lite are likely to be **JCI**[⬛⬛]. For example, if one assumes that around **JCI**[⬛⬛] of customers that use Serato DJ Lite will be converted to a paid subscription, NERA's model appears to estimate a critical diversion ratio for an ATC controller of **JCI**[⬛⬛⬛⬛⬛].*
>
> *[...]*
>
> *At this point, we do not think one can assume that users of Serato DJ Lite do not strongly value being able to use that software. Even though it is free, users may develop a preference for using Serato and therefore upon their next purchase will seek a DJ hardware device that can be used with Serato. Users may also desire to use Serato DJ Lite as they may have ambitions to start playing in clubs, at which time they will subscribe to Serato Pro."*

25. In our view, Lite users should be much more difficult to foreclose than Pro users. We understand from Serato that Serato Lite is not a full-fledged software product, but rather a stripped-back entry version designed to attract users rather than directly monetise them. The hope being that they try DJing and then upgrade to Pro, though many lite users don't upgrade and give up DJing altogether. On that basis, even if Serato Pro was a "must have", Serato Lite would not be. And any user that exclusively uses Serato Lite has not demonstrated any willingness to pay for DJ software and so would be unlikely to pay any extra for hardware in order to continue using Lite, when there are other free alternatives avaible.

26. To demonstrate this, we note that relatively few users continue to perpetually use Serato Lite. A substantial proportion of Serato Lite users "drop off" – they do not upgrade to a paid version <u>and</u> they quickly become inactive on Serato Lite. For example, data from Serato indicates a

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[16]    inMusic, Cross-submission on Statement of Preliminary Issues submissions, 12 December 2023, p.10.

"drop-off rate" of **SCI**[          ][17] of all new Serato Lite users. It is not clear why these users are relevant to any foreclosure calculation, as they clearly do not have a strong preference for Serato software, and in many cases have likely given up on DJing.

27. This leaves only **SCI**[          ] of Serato Lite users that are "potentially forecloseable". Of these, **SCI**[          ][18] upgrade to a paid Serato product within 12 months of initially logging on to Serato Lite (with the remainder continuing to be active on Serato Lite). This is appreciably more than the NZCC's conversion estimate of **JCI**[          ], and according to our previous modelling it would result in critical diversion ratios of **SCI**[          ] for users of Lite-enabled non-ATC hardware (as opposed to the **JCI**[          ] cited by the NZCC).

To demonstrate this, Figure 2 below shows an updated version of our generalised critical diversion model for users of Lite-enabled non-ATC hardware where the probability of separately purchasing Serato is restricted to being between **SCI**[          ]. Additionally, we note that our estimated "forecloseable rate" of **SCI**[          ] can be used to truncate the horizontal axis of our SPA cash-out model at

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[17]     Out of all Serato Lite users who first logged on in July 2022, **SCI**[     ] had not upgraded after 12 months and had not logged on after that point. Out of all Serato Lite users who first logged on in January 2023, **SCI**[     ] had not upgraded after 12 months and had not logged on after that point.

[18]     Out of all Serato Lite users who first logged on in July 2022, **SCI**[     ] had purchased or subscribed to either Serato DJ Pro or Serato DJ Suite within 12 months, which is **SCI**[     ] of those users and users that had logged on to Lite after 12 months. Out of all Serato Lite users who first logged on in January 2023, **SCI**[     ] had purchased or subscribed to either Serato DJ Pro or Serato DJ Suite within 12 months, which is **SCI**[     ] of those users and users that had logged on to Lite after 12 months.

28. Figure 1 above to its most relevant range.

**Figure 2:Extract of generalised critical diversion model showing updated estimates to Lite-to-Pro conversion SCI[　　　　　　　　]**

Source: NERA analysis of ATC and Serato data.

29. But perhaps more importantly, the actual diversion of Serato Lite users would be significantly dampened by the fact that users of Serato Lite have a number of other options for free DJ software and we would not expect their decision on which piece of hardware to purchase to be swayed by the availability of Serato Lite (or lack thereof).

30. We also note that this drop-off pattern appears to be consistent across different cohorts of Serato Lite users. For example, Figure 3 below shows that **SCI**[　　　　　　　] Lite-only users (i.e. those who never purchase a paid version of Serato) become inactive[19] within only a few months of first logging in, regardless of the month and year in which they first log in. According to this data, on average, only **SCI**[　　]% of Lite-only users remain active after 3 months; **SCI**[　　]% remain active after 6 months; **SCI**[　]% remain active after 12 months; and a mere **SCI**[　]% remain active after 24 months.[20]

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[19] Here, "inactive" means they do not log on again for at least six months. So an active user in a given month is one that either logs on in that month or one of the following five.

[20] These figures are not directly comparable with the drop-off rates in the previous paragraphs because they refer to the proportion of <u>Lite-only users</u> that remain active, rather than considering the proportion of <u>all Lite users</u> that either upgrade or remain active on Lite.

**Figure 3: Drop-off rate across different cohorts Serato Lite-only users, 2018-2024**

**SCI[**

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Source: NERA analysis of Serato data.

# 5.      The timing of foreclosure

31. At [fn138] of the SOI, the NZCC writes:

> *"If the customer switches DJ hardware at the end of the life of their existing device, the customer will not incur any additional financial cost from switching compared to continuing with the same DJ hardware brand."*

32. Our critical diversion modelling is implicitly forward looking in that it assumes both sales gained and foregone have not occurred, and thus is already consistent with this point. But if we explicitly account for customers that already own hardware, the logic in fn138 implies that foreclosure would not be immediate, in that sense that existing hardware models would not be cut off from access.

33. If this is the case, foreclosure only occurs with a delay, which would mitigate its impact by giving Serato's rivals time to respond (e.g. develop/reposition software). This also means that the protections from the SPA would still have an effect with a lag, as hardware released before the SPA protections fall away would continue to work with Serato afterwards.

34. In this regard we note that in 2023, **SCI**[     ] of Serato's unique user/hardware combinations involved hardware that was no longer available for retail sale (with a weighted average release date for those devices of **SCI**[                ]), indicating DJ hardware has a long lifecycle and is not replaced often. So this lag could be significant. Additionally, Serato has advised us there is a significant second-hand market for DJ hardware which means that not all users will buy new hardware even when their current hardware needs replacing. Both of these factors will prolong the delay before a foreclosure strategy can be fully implemented.