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ASX Limited
20 Bridge Street
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Attention: Keith Purdie

By email: chessreplacement@asx.com.au

Dear Keith,

SUBMISSION – CHESS REPLACEMENT: REVISED IMPLEMENTATION TIMETABLE ("CONSULTATION PAPER")

In March this year, ASX formally announced a delay to the CHESS Replacement go-live date. ASX is now seeking feedback from CHESS Users on their ability to meet the proposed revised one-year delay to the implementation schedule.

Computershare continues to progress its development and our sizeable project resources have remained focussed on building a solution for our business to continue to serve the issuer community, even throughout the COVID-19 environment. Our expert project team leverages our deep experience in major global market infrastructure projects. We draw on our technical expertise in managing the impact of market change for our 10,000+ issuer clients globally. Our input is guided by the need to ensure a fair and equitable outcome for the two primary interest groups in securities markets: issuers and their investors. In this project to date, the cost-benefit position for issuers is far from balanced and material questions regarding the impact on investors remain outstanding.

However, prior to providing our response to the consultation paper, we see a need to highlight our concerns around:

1. The consultation process, and
2. The broader project.

CONSULTATION PROCESS CONCERNS

CHESS is an essential piece of Financial Markets Infrastructure with vast and deeply embedded usage across the financial industry. It is widely acknowledged that using a brand-new, unproven blockchain technology is an ambitious and massive technical challenge to the ASX, and therefore to each market participant.

This is further complicated by the market structure changes embedded in the project in the form of changes to the roles, responsibilities, rights and access of stakeholders driven by the technology architecture and the extensive, 450 plus pages (and counting) of proposed new rule framework.

Now, in the face of material internal and external challenges to the completion of this project, it is apparent that ASX's ambition to deliver this project despite mounting pressure, is unwavering. This position is partially evidenced by this consultation process, which is clearly designed to prioritise the project delivery date over market participant's many uncertainties. In effect, the ASX is transferring massive project risks to market participants without giving due consideration to their concerns.

Our concerns with this consultation process are highlighted below.

1. **Absence of transparency in addressing ASX's stated reasons for calling the delay.**

   It is now evident that a 1-year delay to the implementation schedule was required prior to the disruptive impacts of COVID-19.

   As explained by ASX in the announcement to the market on 25 March 2020, factors including concerns raised by the market, functional changes and ASX's own readiness meant that the project's go-live date needed to be delayed.

   In forming a view on the validity of the proposed implementation timeline, it is important for CHESS Users to understand the detail behind the triggers for a delay, and how they have been addressed by ASX, however this information has not been made available. Specifically, ASX has not explained:

   - What were the concerns raised by the market in relation to the original timeline, and how have these been addressed by ASX;
   - What were the requests for functionality changes, and what decisions have been made by ASX to amend the original functionality, including supporting business case for this functionality; and
   - What are the details of the elements of ASX's own readiness that required additional time, the status of these items, and an estimate of the work required to satisfactorily complete these items? It is also relevant to understand how these items were identified, and whether there were any additional items identified during the period from March to July.

   This information is relevant to a CHESS User's assessment of the revised implementation schedule.

2. **Insufficient information available for respondents to provide a meaningful response to this consultation paper.**

   The ASX has asked the industry to form a view of, and commit to, a revised implementation schedule where key elements of the information required to make that assessment remain outstanding, incomplete, contingent, and susceptible to significant uncertainty.

   The ASX has not provided a clear "end state" picture of this project to CHESS Users. This means that stakeholders are guessing at what the outcome might be at go-live for Day-1 and later deliverables specified in ASX's 2018 consultation process. This is in part a natural outcome of the "agile" approach the ASX has chosen to apply to the project, meaning that they themselves are still "making it up" as the project unfolds. An additional outcome of this approach is that it prevents a wholistic view of the outcome being available to be challenged and critiqued.

   Consequently, ASX's Consultation Paper is asking CHESS Users to form a view of, and commit to, a timeline for a project that they do not have a final picture of, and that they have not given proper consideration to.

   Material information remains outstanding, including but not limited to:

   - Final and complete set of New Rules for the new system and its implementation (currently 450 plus pages with a third tranche unseen);
   - Node functionality, costs and benefits;
   - Data governance framework;
   - Transactional pricing for existing and new, mandatory and elective features; and

- Four additional, previously unplanned software releases (bringing the new total to eleven).

  It is important to highlight the relevance of rescheduling and repackaging the outstanding software deliverables, including the addition of four new software releases to the testing environment:

  - Three of these new releases contain functionality that has a direct impact on Issuers/Registries and the ability to manage share registers. The remaining release impacts Fund users.
  - Some of that functionality involves re-work for specifications initially delivered as far back as ‘Drop 1’ which has proven to be flawed.
  - The final drop includes new functionality, aspects with which we have raised concerns to ASX and remain open as part of the tranche 2 rules consultation.

ASX’s agile project approach to the project including rule changes and industry engagement, is wholly inappropriate for a once-in-a-generation financial market upheaval and impossible to govern adequately under the current model.

This has created significantly more risks and uncertainty relating to the technical design, implementation requirements, operational impacts and overall costs to connect and transact on the new system. The delays in providing such critical information make it difficult for the industry to plan, design and manage our substantial effort.

3. Inadequate account of the impact of COVID-19

As evidenced by the serious escalation of conditions in Victoria and NSW over the last two weeks, Australia is in the midst of an unprecedent social and economic disruption as a result of COVID-19.

This consultation process requires CHESS Users to make assumptions around the prioritisation of operational, investment, technical and management resources, at a time when the absolute focus is on BAU and keeping the lights on.

Whilst notionally pleasing, it is not realistic for ASX to say that they have included an estimate of the impact of COVID-19 working arrangements on ASX and CHESS Users. The utterly unprecedented nature of the current environment means that it is impossible to make an accurate assessment of the impact.

As we have previously raised with ASX, this question of timeline can only be answered with any degree of confidence by the industry once our society has returned to a normality that permits businesses to focus and invest beyond BAU. Consulting prior to this time diminishes the value of the process.

4. April 2022 appears the *most* optimistic date, even for ASX

The Australian financial market is being asked to accept that it will take the ASX ***at least*** six years to complete this project, assuming that ASX can achieve a go-live date of April 2022.

However, this requires, as caveated by ASX, that there are “no unforeseen material impacts, such as a pandemic relapse or unexpected project related issues, to complete this project.”

However, the experience of this project to date indicates that April 2022 appears to be the ***most*** optimistic of dates, and highly unlikely to be accurate given:

- Current occurrence of a relapse in pandemic conditions in Victoria and NSW.
- Volatility and impact of factors such as the pandemic and global economic conditions.

- Lack of contingency in the project delivery timeline, and ASX's poor track record in accurately estimating requirements and timelines.
- Re-work to messaging specifications caused by poor design and changes to data structures that have been ill-conceived.
- Complexity of market structure changes (roles, responsibilities, rights and access for stakeholders) and ASX's move into adjacencies beyond their core clearing and settlement operating model.
- Only 6% of respondents asked in a recent independent survey felt that the information provided by ASX for this project has been adequate.

Based on this analysis there would appear to be a material degree of risk in ASX's own ability to make its revised timeline of April 2022, which highlights the risk and likelihood that additional delays will be required by ASX in the future.

If these delays were to be properly accounted for today, the eventual go-live date for this project could in fact be April 2023, two and half years from today, or even longer.

We question whether, if that information were known today, would the industry and our regulators find that timeframe acceptable, or, would ASX be challenged today to find a Plan B that met the needs to the market? And by not property accounting for a realistic timetable, is ASX avoiding the difficult question of the viability of the project?

Given the magnitude of the slippage in the timeline of this project to date, and the quantum of investment being asked of the industry, it stands to reason that ASX should be asked to provide independent assurance of their ability to meet a new go-live date, something that is central to the governance of the project.

5. Flawed and self-serving framework for this assessment.

By distilling the question of readiness to a simple yes/no binary question[1], ASX has displayed a distinct lack of understanding of the complexities and risks around the project implementation.

Clearly, much attention has been paid to the narrow drafting of the questions to maximise PR opportunities over an honest forensic investigation into the market's readiness.

The lack of independence and objectivity of ASX's approach to consultation is a criticism that has been consistently levied on the ASX by the industry. Stakeholders have questioned the quality of the information obtained from a processed underpinned by a conflict of interest, where ASX has control over the approach to the consultation process, drafting of the questions, collation of the responses, interpretation, and summarising of a report. This approach allows for a bias towards the objectives of ASX, rather than a true independent reading of the market.

Stakeholders have also questioned the sincerity of ASX's intentions where consultations periods, such as the process run by ASX for Tranche 1 of the new rules, run for six weeks over the 2019/2020 Christmas & New Year period, which grossly failed to allow sufficient time, and supporting materials, to permit full and proper consideration of the material.

Consultation becomes confirmatory when the process is not independent and is meaningless when it is not incorporated into the decision making.

[1] ASX insists each participant answer question 1 in a binary fashion in the initial email dated 30 June 2020, in subsequent emails by Cliff Richards on 10 July and 21 July 2020, and in the Business Committee call on 22 July 2020.

We have to question what is it that ASX has to lose by using an independent firm to complete this process?

Conclusion

In conclusion, the outcome of this consultation paper can only be highly conditional and contingent estimates by the stakeholders, thus rendering any result from this process little more than a hypothetical.

BROADER PROJECT CONCERNS

1. Conflicts of Interest require enhanced governance

A consistent theme underpinning the serious concerns of stakeholders is the numerous and varied conflicts of interest that have evolved in the ASX business and commercial model, and the impacts of those conflicts on material aspects of this project.

Key industry stakeholders are calling upon the ASX to implement a new governance framework to manage the many risks of delivering this project and enable a realistic and safe go-live date be set.

1.1. Commercial Conflicts

ASX is a listed company and must act in the interests of its shareholders.

It need not make decisions about this project in the interests of the market, although there exists an expectation gap with the broader market, many of whom would expect that the National Exchange would act in the National Interest.

The ASX entity structure of today is a very different structure from that when the current implementation of CHESS was designed and built, where ASX was a mutual entity, for mutual benefit. This mutual structure was key to achieving the fine balance of interests between all stakeholders, and the ASX, an underpins the vibrancy and success of our market as we know it today.

The significant settlement capacity issues experienced by ASX in March 2020 highlighted the ASX's failure to invest sufficiently in the underlying infrastructure, a common outcome of private monopoly structures where, in the absence of competitive pressures, profits are taken for shareholders ahead of investment and innovation for customers.

In the case of CHESS, the cost of this decision to not invest in a like-for-like system and instead use the opportunity to set the ASX up in adjacent opportunities for decades to come has been borne the by the entire Australian market, who are now also left vulnerable to future outages or regulatory intervention, and beholden to ASX to accept this project as the only solution.

The absence of competitive pressures on private monopolies are well recognised, and in other industries such as electricity distribution, asset owners are compelled to reinvest in the infrastructure as part of the regulatory framework. We question, what justifies the exception for ASX?

Furthermore, given the substantial and continuing investment that this project demands of ASX shareholders, at what point will they call timeout on this project, and then, where does that leave the rest of the industry?

1.2. Investment Conflicts

Aside from the millions of dollars invested internally by ASX on this project (details of which will not be visible until the upcoming financial results announcement), the ASX has invested AUD$43.3 million in Digital Asset Holdings, LLC (“DAH”), and today holds approximately 8.3% of issued capital, after making their most recent top-up investment in December 2019. In addition, the ASX has also nominated and had appointed a senior executive to the board of DAH.

Today, DAH’s technology remains largely unproven at scale, with the ASX CHESS Project being the first deployment of this technology at this scale, meaning that DAH, and therefore ASX, have much riding on its successful implementation in this project. DAH’s pipeline of exchange projects will be impacted by the success or otherwise of this project.

1.3. Operational Conflicts

Contrasting the operating model of the ASX with other single provider, central, critical infrastructure markets such as electricity, where the market facilitates the exchange of electricity between generators and retailer highlights a clear difference in the lack of separation of critical functions in the ASX’s operating model. This lack of separation creates serious conflicts of interest and a concentration of market power.

Table 1: Analysis of Australian Equities and Electricity Market Frameworks

Key functions	**Electricity**	**Australian Equities**
Decision maker with respect to policy and governance	COAG Energy Council	ASX Board of Directors
Develops the rules by which the market must operate	Australian Energy Market Commission (AEMC)	ASX Management
Handles the day to day operation of the market	Australian Energy Market Operator (AEMO)	ASX Management
Enforces the rules and makes judgements on the regulatory process and makes judgements on commercial proposals	Australian Energy Regulator (AER)	ASX Management
Responsibility to coordinate and track the implementation of industry reform	Energy Security Board (ESB)	ASX Management
Industry reform developed by	Australia’s Chief Scientist	ASX Management
Market operator participates in the market	No	Yes

The impact of these conflicting roles being performed by a single, commercial entity is further emphasised by the vertical integration of the ASX business model, across listing, trading, clearing and settlement.

This means that there is no separation between the elements of the business where the ASX has an absolute monopoly position, such as clearing and settlement, and those where there is an element of competition such as trading and listing.

As a consequence, in designing and implementing changes in clearing and settlement, it is not possible for ASX to separate the commercial opportunities it can frame for one part of its business, from aspects of their mandated role in the other part of its business.

By comparison, NZX has recently announced that it is separating its commercial functions from its regulatory functions, in recognition of the obvious conflict of interest between these two functions

1.4. Personal Conflicts

We believe that it is important that the ASX provide transparency to stakeholders of the structure of any board, executive or management incentive framework linked to the CHESS Project.

2. Implementation Risk demands full confidence

The project is far more complex than originally envisaged. A failure of CHESS would result in the failure of the Australian equity capital market which, even if only for a very short time, would have disastrous implications for the Australian financial system. Any risk that there could be a breakdown in service by ASX or in participation by a CHESS User must be appropriately identified and managed. This requires an independent framework to assess and monitor risk.

2.1. ***Big Bang.*** ASX has made the decision to cut over to the new system on a single day. This requires absolutely everything and everyone to be perfectly in place and functioning precisely across all permutations of the settlement process immediately and from Day 1, otherwise the system will fail. There is no system running in parallel. There is no phased roll-out to fail small and fix fast. It is all or nothing. It means that the entire industry is only as prepared as the least prepared participant and the roll-back strategy is just as important as the implementation plan for the cutover weekend.

Whilst a Big Bang approach may be seen as a lower cost and faster to market approach, it is higher risk, and a risk that ASX has decided upon on behalf of the entire market.

2.2. ***Confidence in the technology.*** Since ASX's announcement of its decision to use distributed ledger back in 2017, ASX has spoken of the success it has experienced with the technology that its partner, Digital Asset has provided. More recently, however, ASX appears to have pivoted away from Digital Asset, very quietly introducing VMWare as a vendor group for this project**.**

Curiously, ASX has provided no transparency to the market around the introduction of the new vendor, which is in stark contrast to the independent and public diligence performed by KPMG and Data61 to validate the selection of DAH as the lead technology provider.

ASX's lack of transparency raises questions:

- Why was the ASX not more transparent about the need to change vendors?
- Were there concerns with the original technology that have led to this switch mid project?
- What are the respective roles of DAH and VMWare on the project now, and once it is operational?

Underpinning this is the risk and concern created by the absence of large scales use cases completed and in use for the DAH technology.

2.3. ***Absence of an independent risk management framework.*** In 2017, Business Committee members called for visibility into the risk management framework for this project in light of the size, complexity, impact and risk of the project on CHESS Users, who are equal stakeholders to ASX, and entitled to equal knowledge of the risks to delivery. Access to a risk register was refused. Today, three years later and in response to the need to delay the project one year beyond the already extended timeline of the project, ASX has assured the market that its new plan is risk based and that the approach being taken is low risk. However, ASX has still not provided the market with a comprehensive risk management plan to go-live. This critical piece of project governance warrants independent oversight to ensure proper consideration and accountability.

3. Business Case remains outstanding

Where an industry is forced to make a material investment to maintain their connection or access to critical business infrastructure, particularly where that infrastructure is a private monopoly, it is essential that the monopoly provide a Business Case to justify the changes proposed, and allow for the proper assessment of the suitability and fairness of project.

A Business Case includes a detailed and supported analysis of what the costs of the project are and who bears those costs, what the benefits will be, who will reap those benefits and how they will be achieved. It will also include a sensitivity analysis to identify likely versus less likely outcomes.

Without this information it is difficult to ensure accountability, particularly in the situation where there is absolute market power.

How are we to ascertain who will win and who will lose out of this project? Is that fair? Is that the right outcome for our market? These are the questions that the monopoly should be held to answer prior to forcing a change of this scale onto the market.

ASX has not provided a Business Case to the market for the CHESS Replacement project.

Conclusion

All of the concerns raised above point clearly to the need for a **<u>new governance framework for this project</u>**; one that provides the independent oversight that is distinctly lacking here. A new governance framework is necessary to deliver a fair, balanced and functioning settlement system, that will enable organic innovation and transformation in contested markets, from a level playing field.

Yours sincerely,

Ann Bowering
CEO Issuer Services, Australia and New Zealand Computershare Investor Services

cc: Ms Dodie Green, Senior Manager, Market Infrastructure, Clearing and Settlement Facilities, ASIC

Response to consultation questions

Question 1

Can your organisation meet the revised implementation timetable with a go-live date of April 2022? YES/NO.

In our view, this question is fundamentally misguided, and a binary yes/no answer is simply not feasible given the extent of ASX's outstanding technical, procedural and regulatory requirements.

We remain committed to progressing our development in line with the revised implementation timeline, however in order for this timeline to be a realistic pathway to a successful industry wide go-live of this project, ASX must resolve the material uncertainties, including the installation of an independent governance model for the project, before an affirmative response is possible.

Question 2

If you answered NO to question 1, what are the challenges for your organisation in meeting the timeline?

Nil response.

Question 3

If you answered YES to question 1 are there any dependencies that ASX should be aware of, and what would be the impact to your organisation of a delay beyond April 2022?

A complete and accurate response to this question is not feasible given the "in progress" status of material aspects of ASX's deliverables for this project, and the impact of external factors, all of which are discussed in our covering letter.

ASX's approach to this project has created significant uncertainty relating to the technical design, implementation requirements, operational impacts and overall costs to connect and transact on the new system. The delays in providing critical information make it difficult for CHESS Users to plan, design and manage the substantial effort required, and ultimately make it impossible to unequivocally affirm readiness by April 2022.

Our ability to evaluate and confirm readiness is highly dependent on the significant number of outstanding information requirements from ASX, which impact the effort and resource requirements need to meet the revised timeline.

The table below highlights the impact of critical information gaps.

Table 2: Cause and effect of project concerns

Project-critical outstanding information or process flaw:	**…is caused by poor Project Governance and/or approach**	**…has led to poor feature design, unknown industry support, or features not core to ASX's role**	**…has an impact on planning a realistic timeline**
Lack of Business Case for new and changed components	Yes	Yes	X

Project-critical outstanding information or process flaw:	…is caused by poor Project Governance and/or approach	…has led to poor feature design, unknown industry support, or features not core to ASX's role	…has an impact on planning a realistic timeline
Unknown connectivity costs for like-for-like and node access	Yes	X	Yes
Unknown transactional costs for new and changed components	Yes	Yes	Yes
Approach to industry procedures	Yes	X	Yes
Approach to rules consultation	Yes	Yes	Yes
Lack of (delayed) Data Governance Protocol	Yes	Yes	Yes
Lack of an independent validation of ASX's new system capacity	Yes	X	Yes
Lack of an independent validation of the ability for the entire market to upgrade successfully on the big-bang go-live weekend and/or rollback strategy	Yes	X	Yes
Potential for migration issues leading to long term data quality problems	Yes	X	Yes

Question 4

If your organisation chooses to provide feedback on the rule amendments, can your organisation meet the revised timetable for providing feedback on the further rules consultation commencing in early November 2020 as set out in section 5.3?

YES/NO/Not applicable. If you answered no, please provide information supporting your answer.

Yes.

We appreciate the revised approach to consultation on the rule amendments, which addresses our prior requests for an extended review period for such significant regulatory changes from the 6 weeks previously provided and provision of the comprehensive review pack for review as compared to the prior piecemeal approach.

Computershare will provide feedback to the Tranche 3 and Consolidated Draft Rules Consultation due for release by ASX in early-November 2020. We acknowledge ASX's revised stance on the time provided to stakeholders to complete the review of draft rules with a time period of 15 weeks.

To improve regulatory certainty, as a matter of urgency ASX should respond to long-standing questions on whether there will be other regulatory changes required to enable operation the replacement system.

However, we must express our concern that the ASX's response to the Tranche 3 and consolidated rule package will not be issued until early June, likely 5-6 weeks after ASX has shared the rules with ASIC & RBA.

On the basis that ASX must have formed its response to the Tranche 3/consolidated rules consultation by the time of their communication to ASIC/RBA, it is entirely unclear why ASX would delay releasing its consultation response until this time. This is contrary to the earlier timelines, which provided for release of ASX's response to the market prior to initial lodgement with ASIC/RBA and deprives stakeholders of the opportunity to understand and consider ASX's response before the final package is sent to the regulators.

We also seek clarity regarding how ASX proposes to address the functionality that it has now ear-marked for a 1.1 release in the consolidated rules package. Given that elements of these functions may remain uncertain in November due to the additional deferral afforded to them, we question how the associated rules could be included in the consolidated package in a viable manner. Could you please clarify how these rules will be handled?

Question 5

How long after the go-live date would your organisation be ready to commence readiness activities (including technical accreditation and operational readiness) for features included in release 1.1 as set out in section 2.3?

Specify the number of months. Please provide information supporting your answer

ASX has not yet arrived at an industry agreed position in relation to this body of work.

Whilst there is broad industry support for the objectives of release 1.1, there remains a great deal of work to be done for ASX to align the stakeholders to a position where a fair, realistic and workable solution can be defined and agreed.

This is partially evidenced by the extent of concerns called out in our response to the Tranche 2 of new rules, and we note that ASX's response to these concerns is outstanding.

We support the introduction of additional digital servicing channels for investors, however we continue to call for a review of ASX's proposed solutions to ensure that they are fit for purpose, not detrimental to competition, and are viable from a structural, legal, cost and risk perspective.

In their current form, the proposed solution designs for these functions place undue burdens and dependencies on the issuer community, requiring changes to existing DRP/BSP plan rules and complex functionality to service. ASX has provided no guidance on the requirement for issuers to communicate those changes to investors already enrolled in a plan. Impacts include timeframes to manage those communications and any notice periods required.

Consequently, this question should be set aside until an industry agreed position is established, and at that point, appropriate consideration can be given to a timeline for delivery.

In our view, given the gap between stakeholders and inherent risk associated with these transactions, this requires 12 months from actual go live.