



Review of the Interim Report of the ACCC Water Market Inquiry

Independent review of implications for the NSW Government

A Report prepared for The NSW Department of Planning, Industry and Environment

Tuesday 3 November 2020

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Abbreviations

ACCC	The Australian Competition and Consumer Commission
AER	Australian Energy Regulator
ASIC	Australian Securities and Investment Commission
Basin	Murray-Darling Basin
BOC	Basin Officials Committee
BoM	Bureau of Meteorology
COAG	Council of Australian Governments
DLT	Distributed Ledger Technology
DPIE - Water	The NSW Department of Planning, Industry and Environment - Water
IIO	Irrigation infrastructure operator
Interim Report	<i>Murray-Darling Basin water markets inquiry – Interim report</i>
IVT	Inter-valley trade
MDBA	Murray-Darling Basin Authority
MinCo	Ministerial Council
NEM	National Electricity Market
NRAR	Natural Resources Access Regulator
NSW	New South Wales
NWI	National Water Initiative

Executive Summary

The New South Wales Department of Planning, Industry and Environment – Water (DPIE - Water) engaged Aither to review the Australian Competition and Consumer Commission's (ACCC) *Murray-Darling Basin water markets inquiry – Interim Report (30 June 2020)* (Interim Report) and assist DPIE – Water in considering the NSW Government's response to the Interim Report and the broader inquiry.

Aither has prepared this review for the purposes of:

- providing an independent analysis of the Interim Report, by reviewing and commenting on the specific options raised in it,
- providing DPIE - Water with a 'point-in-time' assessment (i.e. reflecting our views on the basis of information available at the time) to consult further and inform discussions with the ACCC prior to the release of their final report, and
- suggesting the potential prioritisation of options and a staged approach to reform for the NSW Government (and potentially other governments) to consider.

Our review is focussed on the options presented in the Interim Report, rather than a broader review of current water reform issues. However, we are conscious that it is written against the background of a number of Murray-Darling Basin (Basin) issues that have been raised by NSW stakeholders, including the provision of market information in public registers and the connection between water market and physical constraints – particularly the movement of water downstream through the Barmah Choke.

This report primarily contains Aither's independent analysis, however it also documents the views of subject matter experts from within the NSW Government and WaterNSW (noting that those views are not the formal views of the NSW Government, which will be informed by further consultation and considerations).

Our key findings are provided below, and the report provides detailed analysis of each of the individual reform options that are raised by the ACCC in the Interim Report.

1. It is essential that confidence is restored to water markets through on-going staged reforms after the ACCC's inquiry concludes.

The Interim Report highlights the significant benefits of water markets in the Basin, and identifies the need to improve confidence in their operation.

In Aither's view, restoring that confidence can be achieved through:

- the ACCC, in its final report:
 - reviewing and prioritising the options raised in its Interim Report, including an assessment of the potential costs and benefits of those options,
 - making clear findings as to the allegations of misconduct that have been raised prior to, and during, the inquiry,
 - providing governments with a potential reform roadmap, given the inter-related nature of many of the topics and issues,

- Governments (both Basin State and Commonwealth):
 - determining how the market will be governed and regulated (including how future allegations of misconduct will be addressed) – potentially informed by any ACCC recommendations and roadmap,
 - consulting with water users to ensure solutions are targeted, proportionate and meet end-user needs,
 - outlining a staged approach to cross-jurisdictional issues – again, potentially informed by any ACCC recommendations and roadmap, and
- the NSW Government continuing to undertake the NSW-focussed reforms identified in the Interim Report, or other reforms it has identified, – again, in a staged approach.

2. Water markets have developed characteristics that need to be preserved through any future reform process.

Aither agrees with the ACCC's overall assessment that water markets are an essential part of Basin water management and that while the market is generally functioning effectively, it is important to ensure that performance is not undermined by market participants lacking confidence in it. Therefore, we agree with the central message of the report that water markets are important and that Basin States and the Commonwealth Government should continue to consider ways to improve their performance and integrity. However, it will be important to ensure that these improvements are built on the following key characteristics of the markets that the ACCC has identified:

- land and water should continue to be separated to facilitate the water market, and feedback received by the ACCC and presented in the Interim Report suggesting 're-bundling' should not be supported,
- any regulation of market participants should be related to their conduct, not to characteristics of a particular owner or market participant, and
- the role of investors is important for the market and they provide benefits for other market participants.

3. The ACCC's final report could helpfully provide a roadmap, that is informed by analysis of costs and benefits, and assists governments prioritise future reforms.

The Interim Report identifies a suite of water market governance, architecture and transactional performance issues. These issues arise for a number of reasons, ranging from the complexity of managing the resource, to inadequate administrative systems and processes and more fundamental issues around governance and market regulation, particularly across state boundaries.

Therefore, the options that the ACCC has identified in the Interim Report to address these issues also range from major institutional reforms to more practical and immediate improvements in the delivery of government services to market participants that could be implemented within each jurisdiction.

The issues and options are generally not prioritised by way of materiality and therefore it is difficult to determine which reforms are most important. As a result, the Interim Report may give the impression that the magnitude of the problems with water markets are greater than they actually are.

Therefore, it would assist the NSW Government (and other governments) if the ACCC's final report assesses the options further with respect to the costs of regulation, benefits, potential sources of funding and resources. In doing so, the ACCC could provide a potential roadmap for reform that

prioritises the options and assists governments making targeted and proportionate responses noting that governments may also need to undertake their own stakeholder engagement and cost benefit analysis.

4. Future governance arrangements will be important to ensure accountability for delivering the roadmap.

This review of the Interim Report summarises the four key themes identified by the ACCC, namely:

- Conduct of market participants,
- Improving trade processes and market transparency,
- Improving market architecture, and
- Changes to market governance.

Aither's summary views on the individual themes are provided below. Our views reflect an overall focus on improving the integrity of the market and participants' confidence in it, and doing so in a timely, achievable and cost-effective manner.

Future governance arrangements will be essential in delivering these options, as some of them will only require actions from individual governments (particularly the simpler, lower cost ones), however many of the options will be inter-jurisdictional and potentially more complex and costly. Therefore, governments will need to identify long term governance and regulatory arrangements that will deliver the best accountability and responsibility for market improvements. The governance and market reforms identified in the ACCC's inquiry provide a significant opportunity for NSW, other Basin States and the Commonwealth to establish more robust regulatory oversight of the Basin's water markets – and as a result, its shared water resources.

5. Conduct of market participants – review findings

In principle, Aither supports the ACCC's option of implementing a cost-effective water market intermediary licensing scheme. A harmonised state-based approach may be the most timely and effective method of delivering this increased regulation, however the optimal arrangements will depend on the design of broader reforms (particularly if a new or revised market regulator is established).

While the financial regulation framework has useful elements to draw on and reflect in water market arrangements – particularly for more sophisticated market products (e.g. its current application to derivatives) – it is not clear that there is a current need for broader adoption of this more complex and costly form of regulation. The scope and application of this form of regulation may warrant future consideration, but significant further work would need to be undertaken by the ACCC to demonstrate how this would be an immediate and cost-effective priority at this stage.

In addition to the regulation of intermediaries, Aither supports the broader market having a visible, active and effective regulator of conduct and enforcer of agreed market rules – whether that be a current entity assuming a clearer 'water market-focussed' mandate, or the creation of a new independent market regulator. In our view, there is merit in independent Basin-wide (perhaps national) water market oversight that recognises the authority and responsibility of NSW (and the other states) to manage water resources and operate markets, but has its own separate authority and responsibility for market oversight – i.e. regulation of intermediaries and other market participants (including buyers, sellers, investors and irrigation infrastructure operators (IIOs)) and the development and enforcement of 'market integrity rules.'

Importantly, Aither believes that most market participants would welcome a single regulatory body that could investigate allegations of misconduct and make definitive rulings or assessments. Such a body could also have responsibility for periodic audits of trading activity including whether market participants are accurately recording trade information.

Overall, resolving these market governance arrangements will provide clarity around the reform implementation pathway for other actions. Clearly any inter-jurisdictional initiatives will require the support of other Basin States and the Commonwealth. While this makes reform more complicated than some of the NSW-specific actions that the NSW Government could advance independently, the connected nature of the water market (particularly in the southern Basin) dictates that some reforms need to be cross-jurisdictional and this provides the NSW Government with a leadership opportunity to deliver the best outcomes for NSW, in addition to the entire Basin.

6. Improving trade processes and market transparency – review findings

Aither supports a range of lower cost, but beneficial improvements to trade processes and market transparency which appear to be widely supported by water market participants. These include improving information around trade prices (e.g. distinguishing \$0 trades) and improving certain trade processes and the provision of improved market information – particularly from IIOs, where a co-ordinated approach to funding and system improvements may be beneficial.

In some cases, it appears that these have already been addressed (at least in part) by NSW and / or other Basin States. Likewise, Basin States have made recent improvements to their public reporting – relevantly in NSW through the introduction of the Trade Dashboard, WaterInsights portal and other information resources – noting that there remains room for further improvement and provision of data and information to end-users. These ongoing improvements in communication with the market should result in greater transparency, understanding and knowledge, which may reduce the need for major changes to water registers and trading platforms.

The ACCC raises the option of providing further information about trading parties and transactions. This information is likely to be useful and appropriate for government entities (such as licensing authorities or a market regulator), but we question whether that information should be in the public domain. Likewise, the ACCC raises the option of increased verification of trade data. While there are clear benefits in this verification, it may be that approaches such as periodic audits by an independent regulator are more cost effective and would not unnecessarily delay trade processes.

The ACCC has taken the opportunity presented in publishing an Interim Report to offer some ‘blue-sky’ and innovative trade improvement options, including consolidated registers, exchanges, clearinghouses and distributed ledger technology. Some of these options may be beneficial, however we suggest that the ACCC – in consultation with the NSW Government (and other Basin States) will need to engage with market participants (in NSW and throughout the Basin), to more fully understand user-needs, potential costs, willingness to pay and the overall benefits of the potential options.

In cases where new technological solutions are proposed, this analysis will need to consider the incremental costs and benefits in addition to more straightforward reforms – as they are generally major and sophisticated reforms for a small market.

There does however appear to be increasing support for a single Basin-wide information portal, which would rely on current Basin State and improved IIO data, rather than replacing it. Additionally, the market would benefit from improved (or at least consolidated) information on supply and demand across the Basin, including between zones. While it may take some time and cost in the short to medium term to scope and deliver such a portal, the resulting improvements in transparency and

market education may reduce the need for the major changes to water registers and trading platforms outlined above.

7. Improving market architecture – review findings

Aither supports NSW and other Basin States exploring opportunities to improve transparency, understanding, and the effectiveness of existing market architecture, before pursuing any significant changes – notably in relation to arrangements for allocation announcements, storage information and carryover. It is not clear that the various options raised in the Interim Report on these matters will address problems identified (or that these are high priority changes), and the potential changes could affect existing property rights – which would need careful consideration.

Overall, the market architecture issues raised in the Interim Report are generally complicated and often have broader water resource management implications than purely market implications. It may therefore be advisable for the NSW Government to consider formalising its broader policy positions – to inform future steps. Furthermore, given the cross-border nature of many of these issues, more effective inter-jurisdictional governance and oversight arrangements are required to resolve them, either by clarifying current arrangements or undertaking reforms. These governance issues require prioritisation before major changes to market architecture are undertaken, noting the relationship between the market and the underlying hydrological realities.

There are however a number of immediate practical reforms that should improve market operation, including ensuring equitable and efficient access to trade opportunities (e.g. the process for applying and approving trade through the Murrumbidgee constraint and across the Barmah Choke).

8. Changes to market governance – review findings

Aither supports the general aims and principles associated with governance that are outlined in the Interim Report, and acknowledges the concerns raised by the ACCC and stakeholder submissions, however the lack of detail as to proposed models or arrangements makes it difficult to assess them.

As noted in relation to the conduct of market participants (above), resolving the governance issues and roles and responsibilities for oversight is one of the critical first steps in improving confidence in the market. Furthermore, any new or enhanced regulator needs to be supported by an appropriate and enforceable regulatory regime. Practical changes to existing arrangements could be made by individual states but resolution of the potential for Basin wide regulatory arrangements will be critical in determining the broader roadmap for reform.

Again, we consider it essential that governments clarify how the market will be governed and regulated (including how future allegations of misconduct will be addressed), and provide guidance as to how future reforms will be identified and implemented.

9. Potential next steps for the NSW Government

Noting that the NSW Government has already provided the ACCC with a high-level submission in response to the Interim Report, and that DPIE - Water's next steps are likely to be subject to further internal government and external stakeholder consultation, we suggest that DPIE - Water undertake the following potential next steps:

- confirm what can be readily done (or has been recently) within the state and commit to a NSW reform roadmap for implementing the 'easier wins' (i.e. no regrets actions) that are supported by market participants,

- obtain further NSW stakeholder feedback to assist in prioritisation of the options, particularly with a view to ruling out options that are excessively costly and do not materially improve market integrity or confidence,
- request the ACCC give more consideration to the appropriate governance and regulatory arrangements for water markets in the Basin and the costs, benefits, relative priority and the potential roadmap for reform as part of their final report, and
- work with other Basin jurisdictions to come up with an agreed governance and regulatory approach and roadmap for reforms, particularly those requiring inter-jurisdictional cooperation to improve market integrity and confidence.

Introduction

Australian Government inquiry into water markets

On 7 August 2019 the Australian Government announced that it would direct the ACCC to conduct an inquiry into markets for tradeable water rights in the Basin. The following day the Commonwealth Treasurer released a Terms of Reference for the inquiry, and the ACCC held public forums to accompany the release of an issues paper in mid-October 2019. The ACCC received submissions in response to its issues paper up to 30 Jan 2020.

The ACCC's Interim Report was released on 30 July 2020, having been postponed from its original due date of 31 May 2020. Given the delay in the release of the report, the deadline for submissions has also been extended from 28 August 2020 to 30 October 2020 – noting that the NSW Government submitted a high-level response to the ACCC for the Interim Report's original August deadline.

The ACCC is required to report back to the Commonwealth with its final report by 26 February 2021.

Independent review for the NSW Government

Aither has prepared this review of the ACCC's Interim Report for DPIE - Water for the purposes of:

- providing an independent analysis of the Interim Report, by reviewing and commenting on the specific options raised in it,
- providing DPIE - Water with a 'point-in-time' assessment (i.e. reflecting our views on the basis of information available at the time) to consult further with and inform discussions with the ACCC prior to the release of their final report, and
- suggesting the potential prioritisation of options and a staged approach to reform for the NSW Government (and potentially other governments) to consider.

Our review is focussed on the options presented in the Interim Report, rather than a broader review of current water reform issues. However, we are conscious that it is written against the background of a number of Basin issues that have been raised by NSW stakeholders, such as:

- concerns about a lack of transparency and access to timely information – particularly price and water availability – as reflected in recent NSW Government announcements about future consultation on market transparency,
- interest in a single centralised exchange or point of truth,
- perceptions of non-competitive conduct and speculation in the market,
- the licensing of water brokers and ensuring compliance with standards,
- concerns about the implications of irrigation development downstream of the Barmah Choke,
- desire for any new regulation to be proportionate and cost-effective,
- requests for grandfathered tags to be phased out, and
- support for more equitable access to IVT.

This report primarily contains Aither's independent analysis, however it also documents the views of subject matter experts from the NSW Government and WaterNSW who were consulted as part of developing this report. Views of those subject-matter experts are identified as such, where relevant. Those views are not necessarily the view of the NSW Government, which will be informed by further consultation.

Given the length of the Interim Report, this document is structured to reflect the key themes and options for market reform that the ACCC has identified:

- conduct of market participants,
- improving trade processes and market transparency,
- improving market architecture, and
- changes to market governance.

For each of the four key themes in the Interim Report, we have provided:

- a summary of the issues raised, and options identified by the ACCC,
- a summary of Aither's review of the issues and options, and
- an analysis of each of the specific options, including:
 - a summary of the ACCC's proposal,
 - key considerations arising from the option – i.e. potential impacts, questions, further work and additional insights from consultation with NSW Government and WaterNSW subject-matter experts, and
 - Aither's current view on each specific option based on readily available information and our existing knowledge, noting that the limited time available means that there are gaps in our ability to comprehensively assess each option.

Aither has not commented on the sections of the Interim Report relating to market trends, drivers and participants (Part II of the Interim Report), as they are beyond the scope of this review. We do however agree with a number of the ACCC's conclusions about water markets, including:

- any regulation of market participants should be related to their conduct, not to characteristics of the owner or market participant,
- the role of investors is important for the market and they provide benefits for other market participants,
- feedback received by the ACCC and presented in the Interim Report that water and land should be 're-bundled' should not be supported, and
- the high water market prices over the past three years are more a product of supply and demand than the conduct of any particular market participants.

1. Conduct of market participants

Summary of issues and options raised in the Interim Report

The ACCC includes the full range of market participants in this theme, however is most focused on the conduct and behaviour of water intermediaries, investors, and to a lesser extent, IIOs. Despite extensive analysis, the ACCC does not appear to have identified specific instances of market manipulation, and the ACCC acknowledges that most or all practices employed by institutional investors are not illegal, noting that it is still investigating these matters. However, in summary, the ACCC has specifically stated:

There is insufficient regulatory oversight, and enforcement and compliance activity, in relation to some practices of some market participants.

We have summarised the issues and potential solutions that the ACCC has identified in this theme as follows:

Issues

In summary, the ACCC has raised the following issues:

1. Brokers and exchanges are unregulated, allowing conflicts of interest to arise and opportunities for transactions to be reported improperly.
2. There are insufficient rules to guard against conduct aimed at manipulating market prices, and no specific body to monitor the trading activities of market participants.
3. Information failures favour better-resourced and professional traders who can take advantage of opportunities such as inter-valley trade/transfer openings.
4. There is the potential for market manipulation by investors or larger/more sophisticated participants.

Options

The ACCC has identified the following three options to address these issues, which are reviewed in detail further below:

1. Government-initiated licensing scheme,
2. Applying the financial regulation framework to all water products, and
3. Establishing an independent market-focused government regulator.

Summary of Aither's review

Review of issues raised by the ACCC

We agree with the conclusion in the Interim Report that there is a need to improve market confidence in the overall regulation of conduct in the market. In our view, while the market is generally functioning effectively, that performance is undermined if market participants lack confidence in it and

perceive that they have no clear regulator to seek information, advice or compliance determinations from.

Therefore, it is appropriate to take steps to ensure that the market is (and market participants perceive it to be) functioning fairly and without manipulation by intermediaries, investors or other parties.

As opposed to assuming that misconduct is not occurring until it is reported by other market participants, Aither's view is that more active and independent market oversight could increase confidence in the integrity of the water market, across the southern connected Basin in particular.

Review of options identified by the ACCC

Aither has analysed each of the three market conduct options proposed by the ACCC and in summary:

- There are pros and cons of each of the three options identified by the ACCC and potentially the need for elements of each option (so the options are not 'either / or'). Furthermore, a staged approach may be appropriate – depending on the priority that is given to the various options by the various jurisdictions (for example, if it is agreed that a Basin-wide market regulator should be established as a priority, perhaps this might happen before the roll-out of subsequent market oversight reforms – which that regulator might be responsible for).
- Submissions from several stakeholders, including the Australian Water Brokers Association, suggested the need for specific regulatory coverage for water brokers and intermediaries and hence some form of licensing of intermediaries seems valid. Any system would need to be mandatory to ensure that all intermediaries would need to be involved, but also with appropriate cost and resource requirements to ensure that it did not become a too significant a barrier to entry. Separate state systems (analogous to real estate agent licensing) would likely be effective and more easily implemented, however a consistent or harmonised Basin-wide (or even national) approach should be more efficient and would reduce duplication – provided it can be delivered collaboratively and in the same timeframes as individual state regimes would.
- The financial regulation framework has useful elements to draw on and reflect in water market arrangements – particularly with more sophisticated market products (e.g. derivatives). However, in our view, further consideration of the appropriateness of the various components of the current financial regulation framework (and their costs) is required before they could be applied to the water market. It is unclear which market participants would be required to be licenced under financial services regulation. In Aither's view, simply requiring some market participants and intermediaries to hold a financial services licence in the absence of a broader framework for water market regulation would be insufficient to address the range of concerns raised by the ACCC.
- There is an opportunity to improve Basin wide oversight of certain market integrity and conduct aspects of regulation, noting that this option requires further exploration and buy-in from other Basin jurisdictions. This role could oversee agreed regulatory reforms (including intermediary regulation, market integrity rules, and implementing elements of financial regulation) and regulate the market with the ongoing aim of enhancing the integrity, transparency and efficiency of market settings – instilling confidence in market participants.
- It is important to distinguish between the potential 'market integrity rules' that a Basin-wide market regulator might oversee, and the state-based 'market rules' that NSW and each of the Basin States are currently responsible for in their roles of operationalising markets (e.g. the licensing and trade provisions of Chapter 3 of the *Water Management Act 2000* (NSW)).
- Furthermore, while it may be appropriate for this 'market regulator' to be separate from state

water management agencies, there may be value in not separating Basin-wide water market and water resource regulatory oversight (currently undertaken by the MDBA but flagged to be split out of the MDBA). The Interim Report identifies the importance of aligning water resource management and water market operation (particularly in the case of the issues raised in the 'Market Architecture' theme) and therefore any Basin-wide market oversight is likely to be less effective if there is fragmentation with resource management – again noting state responsibilities for resource management. It is important in this context that the physical / hydrological realities of the river system need to dictate the rules of the market – not the other way around.

- Aither notes that the ACCC could usefully undertake further analysis of the current arrangements for market oversight, including where existing roles and responsibilities are not sufficient to address concerns (e.g. making water-specific consumer law provisions or other elements of an appropriate and enforceable regulatory regime). The ACCC could potentially identify and assess other reform options that would address as many of the issues as possible without requiring fundamental institutional change, providing an alternative approach in the event that a Basin wide approach could not be agreed.
- Overall, the ACCC has identified an important set of needs to enhance market confidence and integrity. Further analysis of the options is required and any reforms will need to be supported by other market improvements – particularly relating to the provision of information by Basin State water agencies about resource availability (e.g. allocations and carryover) and market activity (e.g. trade information).

Detailed review of options – *Conduct of market participants*

1.1. Government- initiated licensing scheme

1.1.1. ACCC's proposal

The first option identified by the ACCC is: '*a compulsory licensing regime at the federal or Basin State level, which sets out the relevant requirements for intermediaries and is supported through civil penalties for non-compliance. This would be limited to regulating intermediaries.*'

The ACCC notes that a government administered licensing scheme could:

- mandate that intermediaries be licensed,
- set standards for professional conduct,
- include elements of market integrity rules as discussed above, and
- clarify the role of intermediaries and their obligations to their clients.

1.1.2. Key considerations

Potential impacts

The introduction of a government-initiated licensing scheme may have the following impacts:

- Improve confidence in intermediaries and therefore the operation of the market as a whole.
- Standardise the performance of intermediaries (and presumably improve the performance of some) with requirements such as trust accounting, client duties and disclosure requirements.
- Cost implications for the government (States or Commonwealth) that introduces it, and potentially for market participants if those costs are passed on.
- Increased costs for intermediaries, and potentially for market participants if those costs are passed through in fees to clients.
- Will require an associated monitoring and compliance regime.
- Potential duplication of effort if done at the individual state level.
- Equally, if not introduced by all states, jurisdictional based loopholes may arise.
- Potential barrier to entry for potential new entrants and may result in existing intermediaries leaving the market and a reduction in competition.

Potential questions and further work

This option raises the following questions and potential for further work:

- Who would lead this regulation, under what legislation and with what funding to establish the framework? (a question for both State or Commonwealth models)
- Is there precedent for comparable market regulation at the national level?

- Do other states support this model – noting that any inconsistency across states would be problematic?
- Noting that previous work has been done by the Council of Australian Governments (COAG) in 2013 to consider regulatory impacts, an up to date cost benefit analysis and Regulatory Impact Statement would be required.

[Additional insights from NSW Government and WaterNSW subject-matter experts](#)

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- intermediary regulation should improve market confidence and may go some way towards resolving broader market issues (such as potentially improving equity of access to trade opportunities across the Barmah Choke and the Murrumbidgee constraint) without addressing all of the concerns about integrity and conduct,
- the previous 2013 COAG Regulatory Impact Statement (and other background work) that investigated intermediary regulation should be considered further,
- a model which all states support would be preferable, but shouldn't stop NSW proceeding – if it decides to support this option,
- improved transparency of information will also support concerns about intermediary conduct, and
- more effective regulation is required but the model needs to be carefully considered so as to avoid the perception of 'just another bureaucratic layer.'

[1.1.3. Aither's current view](#)

Intermediary regulation appears to be supported by a range of stakeholders and it appears that efforts aimed at voluntary or industry-based action are insufficient or do not apply to all intermediaries. Therefore, in principle and without full consideration of the cost impost, Aither supports intermediary regulation to improve market confidence. However, while it will assist in improving confidence in the market (the ACCC has reflected widespread support for regulation in its Interim Report), other reforms are required – potentially including elements of each of the three options in this theme. In other words, intermediary regulation would not resolve all the stakeholder concerns about market integrity and conduct.

Importantly, water broking (and exchanges) is a relatively small industry and a high regulatory burden might act to reduce competition (which would be of particular concern to the ACCC). Therefore, questions remain about costs, benefits and distributional impacts of introducing intermediary regulation, noting that there may be efficiencies through:

- the adoption of arrangements similar to existing comparable markets (e.g. for real estate, stock & station agents), and
- the adoption of a consistent or harmonised Basin or nation-wide approach.

1.2. Applying the financial regulation framework to all water products

1.2.1. ACCC's proposal

The second option identified by the ACCC is the application of the current financial regulation framework as it: '*provides a comprehensive, ready-made market regulation framework that could be applied to tradeable water rights. Its provisions are relevant to the activities of a range of market participants.*'

While the ACCC acknowledges that there may be some flexibility in which elements would be appropriate, and how they would be implemented, current financial regulation includes:

- The requirement for a person who deals in, provides advice on, or sells (financial) products on their own behalf, to hold an Australian Financial Services Licence (AFSL).
- The requirement for a person operating a (financial) market to have market operating rules in place and to hold an Australian Market licence.
- Reliance on Australian Securities and Investment Commission (ASIC) codes and market integrity rules.

1.2.2. Key considerations

Potential impacts

The introduction of the financial regulation framework may have the following impacts:

- Introduce a rigorous framework that is already used in other markets (so will be familiar to some participants and if not, has at least been tested in other industries).
- Similar to a government - initiated intermediary licensing scheme:
 - improve confidence in intermediaries and therefore the operation of the market as a whole, and
 - standardise the performance of intermediaries (so improve the performance of some).
- Could disproportionately affect unsophisticated market participants.
- May impose greater (prohibitive) costs on participants.
- Would need to be Commonwealth led due to nature of legislation.
- Potential impact on property rights – could require redefining basic water products, which were previously judged not to be financial products.
- Could capture participants it was not intended to directly regulate or address problems with.

Potential questions and further work

This option raises the following questions and potential for further work:

- Would some 'buyers' and 'sellers' of allocation and entitlement require an AFSL (not just intermediaries and sellers of more sophisticated products like leases, forwards and other options)?
- Who would fund the establishment of the regime (noting that obtaining an AFSL and meeting other requirements would be a cost of business for a market participant)?

- How to learn from and apply relevant aspects of the financial regulation framework to water markets, while respecting water management arrangements and needs?

[Additional insights from NSW Government and WaterNSW subject-matter experts](#)

Consultation with NSW Government and WaterNSW subject-matter experts reflected the view that while the financial framework has relevant principles, practices and lessons which could be utilised, direct application of the framework may not be appropriate (potentially 'overkill'), given the small size and immaturity of the water market compared to financial markets.

1.2.3. Aither's current view

While the financial framework already exists and elements of it are relevant, it is not immediately clear to us that it is a fit-for-purpose and straightforward solution (as it would require tailoring for the water market).

Therefore, while further analysis is required of the appropriateness of the various components of the current financial regulation framework (and their costs) before they are applied to the water market – the ACCC also needs to consider:

- how the framework fits with other proposed governance and regulatory reforms,
- whether it would be overly onerous given the small volume of trades / size of this market compared to financial markets, and
- who it would apply to, and whether and how well it would address the current issues.

In our view, applying the AFSL requirements to all buyers and sellers of allocation, entitlement and entitlement leases would be excessively onerous, limiting the efficiency benefits of the market.

1.3. Independent market-focused government regulator

1.3.1. ACCC's proposal

The third option identified by the ACCC: '*envisages establishing a market-focused regulator. This could involve creating an entirely new body, or giving an existing regulator new functions. For example, this could be achieved through adding market integrity protections to new or existing legislation, such as a rule prohibiting market manipulation, or through introducing a mandatory industry code. This option would enable the regulation of market participants such as intermediaries, investors and IIOs if necessary, and could be used to consolidate some existing regulation.*'

The ACCC specifically notes the parallel with the Australian Energy Regulatory (AER), which oversees the energy market, and prescribes and enforces fit-for-purpose rules and standards.

1.3.2. Key considerations

Potential impacts

The introduction of an independent, market-focused government regulator would be a major institutional change, requiring state and federal legislative and regulatory change. Importantly, it would be linked to the governance reforms (theme four of the Interim Report and this review) and potentially assist in the delivery of trade and architecture reforms (themes two and three).

If designed and implemented effectively, the introduction of such a regulator should lead to an increase in confidence in the regulation of water markets, through improvements in transparency and accountability.

The establishment of a new entity (or conferral of new powers upon an existing one), would be costly initially, but could be more efficient in the long run if it addresses a range of market (and resource management) issues – particularly if it does so at the Basin level.

A benefit of the introduction of an independent regulator with overall and ongoing responsibility for ensuring market integrity and confidence is that they would be able to prioritise reforms over time and be responsive as new issues arise.

Potential questions / further work

This option raises the following questions and potential for further work:

- How would functions be allocated to institutions – particularly to ensure that roles and responsibilities are clear and not duplicated, or omitted?
- How would water resource regulation and market regulation be managed under this model?
- Who would lead reforms?
- How would intermediary licensing be done under this model? (e.g. at a national or Basin wide level)
- Do other states support this model?
- An up-to-date cost benefit analysis and Regulatory Impact Statement would be required
- Determine the implications and opportunities arising from the recent announcement of the split of compliance and policy functions within the MDBA.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected the view that the option is worth further consideration, particularly in light of the recent announcement concerning the split of the MDBA, but also in light of the lessons NSW has learnt recently from the establishment of the Natural Resources Access Regulator (NRAR), which it could share. Furthermore, subject-matter experts reflected that the market cannot be considered in isolation from water management.

1.3.3. Aither's current view

In principle, Aither supports improvements in market regulation and oversight to improve confidence in the market, but also to improve actual market performance. Having a regulator with sufficient powers to address a range of market integrity and performance issues would likely go a long way to addressing the concerns of market participants, if designed and implemented correctly. The concerns of market participants go much further than just intermediary conduct – noting that some form of licensing arrangements would be required in addition to the establishment of a regulator, and potentially a part of the regulator's role.

Greater independence in market oversight would need to be linked to broader governance reforms, but may provide a valuable opportunity to develop independent, Basin-wide oversight. For example, the regulator could:

- administer an inter-jurisdictional intermediary regulation scheme (option 1 above),
- deliver or be integrated with relevant aspects of financial regulation (option 2 above),
- deliver market integrity rules (like the AER) – making it more targeted and specific to issues in the market, and
- ensure any other market rules agreed by the Basin states were being implemented.

The powers of such a regulator would be important, particularly with respect to the states, as it would need to have a compliance role for the market integrity rules (e.g. the role would need to be more effective than the current regulatory oversight of the Basin Plan trading rules by the MDBA). The role could also potentially have a review role of individual states' market rules – noting that the MDBA currently has these powers under the Basin Plan trading rules, but also that it will be essential to avoid duplication of existing State and Commonwealth roles.

The overall reform package to address the conduct of market participants could include elements of each of the three options outlined in this theme and is likely to require a staged approach. For example:

- the first step could be the establishment of a Basin-wide market regulator (substantially building on the existing powers of the MDBA under the Basin Plan trade rules), followed by that regulator introducing various initiatives such as intermediary licensing schemes and market integrity rules; or alternatively
- some elements of the regulatory landscape (such as state-based intermediary licensing schemes) may be achievable more quickly than inter-jurisdictional agreement on a market regulator and therefore may be sensible to proceed with if inter-jurisdictional agreement cannot be achieved.

In either case, other associated reforms, such as improved price disclosure and trade information would also assist in improving participant confidence – particularly with respect to intermediaries and investors (both the subject of intense scrutiny in the Interim Report, as noted in the next chapter).

2. Improving trade processes and market transparency

Summary of issues and options raised in the Interim Report

This theme includes several sub-themes, addresses many topics and identifies a range of actions or options – many of which are presented as ‘practical recommendations.’ In summary, the ACCC suggests that these aim to address:

- deficiencies in participants accessing reliable and representative market data,
- fragmentation of trade services,
- the absence of a trade processing and market reporting framework governing all entities who process trades, and
- opportunities for substantial improvements through digital technologies.

We have summarised the issues and potential solutions that the ACCC has identified in this theme as follows:

Issues

In summary, the ACCC has raised the following issues:

Overall

1. Differences in trade processes and water registries prevent participants gaining a full, timely and accurate picture of water trade (price, supply and demand).
2. Allocation policies and river operations policy are inadequately communicated and understood.

Quality and timeliness of core market data

3. Participants face difficulties accessing reliable and representative market data (current price, number and volume of recent trades, bids and offers).
4. Trade processes are outdated and fragmented across many public and private service providers.

Mandates to provide efficient trade services and high-quality information

5. There is a need to establish clear and comprehensive trade processing and market reporting framework governing all entities who process trades (brokers, exchanges, IIOs and Basin State approval authorities).

Trade Processes—advising, matching, clearing, settlement, registration and information

6. Interactions with different trade approval authorities across the Basin are cumbersome due to different terminology, fees and approval processes.
7. Inconsistent trading processes have created complex and difficult to understand market data.
8. Differences in Basin States’ management of water rights hinders streamlined interstate allocation trading.

Transaction costs of trade

9. Processing times and approval fees differ between states and advantage some over others, impinging on competitive neutrality.

10. Allocation approval times differ within season, and between authorities.
11. Current service standards for trade approval processing times too generous.
12. There is little consistency in IIO trade approval fees.

Information transparency

13. Problems with the 'source of truth' for various market related data, including multiple and conflicting sources of information.
14. Disconnects in flow of core market data from generation source through to end users (contributes to lack of confidence and confusion about what 'transparency' means).
15. Underlying issues that influence data collection impact market transparency.
16. Trade approval authorities and registers have not kept pace with the market and are not providing reliable or timely data (in part this is about not reflecting the trade sub types and separating them out).
17. Information on allocation policies, allocation announcements, carryover and trading rules also suffer from fragmentation and consistency issues.

Options

The ACCC has identified the following twenty (20) options to address these issues, which are reviewed in detail further below:

Practical changes to trade processing are needed to improve the quality and timeliness of core market data

1. Improve trade data validation and quality assurance before providing to the Bureau of Meteorology (BoM).
2. Update trade application forms to capture further trade information.
3. Remove ability for zero-dollar trades without justification.
4. Increase harmonisation across Basin States' registers.

Practical changes need to be underpinned by clear and comprehensive mandates to provide efficient trade services and high-quality information to market participants

5. Mandate to keep a register of trades.
6. Mandate to provide information services based on registry data.
7. Establish comparable IIO registers.
8. Update Water Regulations for trades of irrigation rights.
9. Ability to register contracts with water registers.
10. Standardised single party identifiers across the Basin.
11. Standards and agreed processes for processing trade processing across the Basin.
12. Harmonised trade application fees.
13. Require prices to be reported for all tradeable water rights.

Digital technologies offer the opportunity to streamline trade services, at the same time as improving information quality and availability

14. Comprehensive and open digital protocol to enhance interoperability.

15. Single information portal for publishing water availability and trade information.
16. A spot market and real-time automated matching.
17. A single exchange platform for posting and matching trade offers.
18. An ASX-like approach of a single clearinghouse.
19. Distributed Ledger Technology which administers trade.
20. A single common register.

Summary of Aither's review

Review of issues raised by the ACCC

We agree with the conclusion in the Interim Report that there is a need to improve market performance, including in NSW, as the current frameworks, processes and systems have generally not evolved as rapidly as user needs and customer service expectations over the last 10-20 years.

The ACCC has categorised the issues as:

- quality and timeliness of core market data,
- mandates to provide efficient trade services and high-quality information,
- trade processes—advising, matching, clearing, settlement, registration and information,
- transaction costs of trade, and
- information transparency.

These issues have all been the subject of previous reviews by the ACCC (and others) and the cause of frustration for market participants, since the establishment of markets in the Basin. That said, a reader of the Interim Report could potentially perceive the magnitude of the problems to be greater than they actually are - most markets are imperfect and improvements have been made in many of these areas over time. In our experience, whilst there are challenges, most market participants broadly understand the allocation regimes associated with the entitlements they hold and have access to markets that function reasonably efficiently.

Review of options identified by the ACCC

Aither has analysed each of the twenty trade-processing and market transparency options proposed by the ACCC and in summary:

- We note that NSW, in conjunction with other Basin States and the MDBA, has taken a number of steps recently to improve the capture of trade information and its presentation back to market participants (some of which address issues raised by the ACCC to varying degrees) – such as:
 - updated trade forms that require additional information (in NSW and Victoria), and
 - various DPIE - Water, WaterNSW and Victorian Government websites that provide more accessible resource and market information (e.g. DPIE - Water's 'Trade Dashboard'¹ and WaterNSW's 'WaterInsights portal'²)
- These improvements are important in the context of the outcomes that the ACCC is seeking to

¹ <https://www.industry.nsw.gov.au/water/licensing-trade/trade/dashboard>

² <https://www.waternsw.com.au/waterinsights/water-insights>

deliver, however there are further steps that NSW (and other states) could still take to improve market integrity and efficiency. There are several actions under this theme that Aither supports in principle and are worth further consideration, such as:

- improving the transparency and assurance around data quality – noting that the significant task involved with verifying or validating all trades suggests a periodic audit framework may be more appropriate,
 - efficient online applications,
 - trade processing efficiencies, particularly for more complex transactions such as groundwater and some entitlement trades, and
 - improving access to IIO information.
- However, with respect to some of the more significant market reforms, Aither suggests that there may be value in focusing on the shorter term and lower cost ‘easier wins’, and reviewing the gains before embarking on broader structural changes such as harmonisation or centralisation.
 - With respect to the suite of digital technology options, it will be important to consider the user needs and market demand, including the incremental costs and benefits on top of more straightforward reforms – as they are generally major and sophisticated reforms for a small market.
 - There does however appear to be increasing support for a single Basin-wide information portal, which would rely on current Basin State and improved IIO data, rather than replacing it. While it may take some time and cost in the short to medium term to scope and deliver such a portal, the resulting improvements in transparency and market education may reduce the need for the major changes to water registers and trading platforms outlined above.
 - The other area of important market information that is not addressed in detail by the ACCC relates to information on water supply and demand both across the southern connected system and within each region or trading zone. Improvements to this information have been made (e.g. in the NSW Trade Dashboard) however there is still demand for consolidated information about water availability, use, and carryover by zone and by major users – consumptive, environmental and urban water authority.

Detailed review of options – *Practical changes to trade processing are needed to improve the quality and timeliness of core market data*

2.1. Improve trade data validation and quality assurance before providing to BoM

2.1.1. ACCC's proposal

The ACCC has identified the option: '*Basin States to improve trade data validation and quality checking processes before providing data to the Bureau of Meteorology as required under the Water Regulations 2008 (Cth).*'

The ACCC's rationale for this recommendation appears to be to improve the usefulness of the (significant amount of) water data that is collected and reported by the BoM – for the purpose of providing reliable and up-to-date market information, rather than just for aggregated water accounting or other purposes.

2.1.2. Key considerations

Potential impacts

The introduction of increased levels of data validation and quality checking by NSW may have the following impacts:

- Potentially provide more reliable and up-to-date market information.
- Potentially result in extra time being required for validation and quality checking.
- Impose additional costs on states, delegated authorities and the BoM.
- Could increase time taken to publish verified data.
- Could result in the BoM becoming the primary source of market data (it currently is not), or alternatively adding to the already duplicated landscape of public and private sources of market data.

Potential questions / further work

This option raises the question of what the specific shortcomings are (i.e. the underlying data itself, the validation, the quality checking – or perhaps all three) and whether it is a NSW or BoM (or other state's) issue?

Furthermore, the broader question of the BoM's role in water (and water market specific) information provision remains important, given the fact that NSW publishes trade information, using the same data.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that they:

- were not aware of issues with data provided to the BoM,

- were unclear what the specific issues are (and were confident in the data that is sent to the BoM),
- were unclear on the materiality of the problem, or whether it was likely to deliver a priority solution to the market, and
- had taken steps towards validation of trade price reporting through amending trade forms to require users to report their purpose of trade (which improves identification of potentially mis-reported trade prices).

2.1.3. Aither's current view

While Aither supports improved market data across the Basin, it appears that further details are required on the materiality of the issue, and the cost and efficacy or remedying it via the means proposed. There may be a range of options to verify price data submitted on transfer forms. At the extreme, verification could be costly and may be time consuming resulting in counterproductive delays in publishing information. However, there may be lower cost means of validation and verification and other changes that might reduce the need to pursue verification of all price data (e.g. better labelling of reasons for trade, which has already been implemented in NSW and Victoria). Likewise, a periodic audit regime may provide a more cost-effective approach and provide an appropriate level of confidence in the validity of trade data reported to authorities.

There could also be other options to improve the timeliness (i.e. effectively in real time as state registers are updated) and completeness (i.e. including all IIO data) of all trade data provided to the BoM to better enable a single and useful portal of information that could be used by market participants or a regulator.

2.2. Update trade application forms to capture further information

2.2.1. ACCC's proposal

The ACCC has identified the option: '*Update trade application forms to capture the reason for trade or trade type, struck date, lodging party and matching pathway (for example, matched on exchange, via broker, and so forth.)*'.

The ACCC's rationale for this recommendation appears to be to obtain further information on a range of issues, including:

- broker / intermediary activity,
- the timing of trades, 'struck' prices and delays in reporting market movement, and
- greater clarity about or accuracy of data on forwards, leases, carryover parking and other more complex arrangements.

2.2.2. Key considerations

Potential impact

As with any collection of further information, it is only useful if accurately collected and reported. In this case there may be legitimate policy and market reasons and it may lead to improved market transparency. However, it requires consideration of how to publish any new data collected – and runs the risk of incurring cost (particularly resourcing) without delivering improvements.

To the extent that the additional data collection will allow the NSW Government (or others) to better investigate issues of misconduct, it should be done in conjunction with reforms to regulatory oversight – such that a particular entity has the capacity, mandate and motivation to use it.

The tracking and alignment of deals, transactions and reporting may prove difficult and burdensome for approval authorities and intermediaries alike.

Notably, some of the data requirements identified by the ACCC have recently been delivered by various Basin State Governments (including NSW) and the costs and impacts are now being monitored.

Potential questions / further work

This option raises the following questions and potential for further work:

- Question whether other states (e.g. Queensland and South Australia) will make similar changes / updates (NSW has recently worked with Victoria and the MDBA to update trade forms to capture further information from applicants relating to price and purpose of trades)
- It is not yet clear how new data requirements will be verified / validated. (i.e. will it require a compliance and audit function?), and if new data or approaches will be more accurate as a result
- It will be useful to monitor the results and data generated by NSW and Victoria during the first few months of using the revised forms.
- Questions about the feasibility and need for providing accurate price data for allocation transfers associated with entitlement trades (i.e. "wet" entitlement trades) and with leases and forwards

given the bundled nature of some of these transactions and uncertainty around allocation volumes at the time of contracting.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected support for this option, as evidenced by the recent changes to forms. Experts suggested that there is an opportunity to analyse the data that has been obtained as a result of changes, and continuously review whether trade documentation is fit-for-purpose (including the transition to on-line forms).

2.2.3. Aither's current view

Noting the NSW feedback that this has already been delivered (in part), Aither supports updating trade forms to capture additional relevant information as this appears to be a low cost and effective way to improve market data and hence performance. Given the current capture of data generated from the new forms it should be a reasonably effective way of adapting to user and regulator needs.

2.3. Remove ability for zero-dollar trades without justification

2.3.1. ACCC's proposal

The ACCC has identified the option: '*Remove the ability for zero-dollar trades to be approved or recorded unless certain conditions are met (as exception, and with explanation provided) and continue progress to move trade forms online.*'

The ACCC's rationale for this recommendation appears to be twofold:

- improve visibility of true market price, without the distortion of zero-dollar trades, while also ensuring that market participants do not report zero-dollar trades for tax and other reasons, and
- improve customer experience through on-line forms and presumably assist licensing authorities (WaterNSW and NRAR in NSW) by reducing human involvement and promote 'back-end' improvements – which would in turn improve customer experience.

2.3.2. Key considerations

Potential impact

Further understanding of zero-dollar trades should provide improved market information and increase visibility of actual prices paid and depth of the actual market for commercial trades. However, depending on the ACCC's actual recommendation, it potentially relies on verification / validation to check (which will have costs involved).

Separately, on-line forms should deliver improved service for customers – i.e. traceability, transparency and record-keeping, however they may not be available to all market participants (issues with internet connectivity, etc.).

Potential questions / further work

This option raises the following questions and potential for further work:

- It is not yet clear how new data requirements will be verified / validated.
- How would qualitative explanations be verified or checked while still increasing speed and automation of trade?
- Need to determine what method will actually work, is verifiable at low cost, and won't result in perverse incentives.
- Potential to introduce Corporations Act concepts such as 'related parties' (i.e. directors, spouses, controlling entities of a company) to better distinguish between commercial trades and transfers between accounts.
- Potential for alternative reasons for trade to provide an exemption for non-zero-dollar trades but noting the risk that this becomes a catch all category and is counterproductive.
- As opposed to verification of all zero-dollar transfers, the existing changes to "reasons for trade" could largely address the issues associated with determining true allocation trades. Under an intermediary licencing scheme, compliance audits could be undertaken of reasons for trade which would provide the incentive for compliance for the majority of trades without having to verify every zero-dollar transfer.

- The transition to on-line forms requires planning to ensure both customers and licensing authorities are able to use the functionality.

[Additional insights from NSW Government and WaterNSW subject-matter experts](#)

Consultation with NSW Government and WaterNSW subject-matter experts reflected support for both options, noting that:

- zero-dollar trades are an important and legitimate tool for some users to manage water,
- steps have already been taken towards better understanding zero-dollar trades including amending NSW trade forms to:
 - require justification of zero-dollar trades, and
 - identify administrative trades between related parties or environmental water holders, which are frequently zero-dollar transactions,
- the transition to online trade forms is desirable in the future, but is not an immediate priority, and would benefit from having consistency of online portals across the states, and
- COAG processing time requirements are currently being met.

[2.3.3. Aither's current view](#)

Again, noting the NSW feedback that this is supported and is being delivered (in part) or planned for, Aither supports these options as they appear to be important achievable improvements in the short term. There are likely to be complexities and technical details that need to be worked through to obtain optimal arrangements, which adds weight to the approach of the NSW Government to monitor and evaluate impacts and implications after an initial trial.

Aither supports moving trade forms on-line in NSW, based on strong feedback from market participants over many years that this would be beneficial and that some of the current customer interfaces and approaches in NSW could be improved (e.g. processing and registration of entitlement trades which go through multiple agencies in NSW).

2.4. Increase harmonisation across Basin States' registers

2.4.1. ACCC's proposal

The ACCC has identified the option: '*Increase harmonisation across the Basin States' registers through consistent terminology and data structures.*'

The ACCC's rationale for this recommendation appears to be to address the inconsistencies arising from individual Basin States having their own legislation, terminology, systems and processes – which while largely consistent with the National Water Initiative (NWI) are not strictly the same as each other. While differing state products and terminology (e.g. a 'water access entitlement' however described in each jurisdiction) can be transacted, aggregated and reviewed despite their differences, harmonisation of terminology and data structures has often been cited as a potential market improvement (since the Basin States enacted their own separate water management frameworks over the past 20 years).

2.4.2. Key considerations

Potential impact

Harmonisation should lead to increased simplicity for users – provided that the harmonisation is appropriate (i.e. the alignment is correct). However, it could require redefinition of state-based products or arrangements in underlying state legislation and regulation which could be confusing to market participants, could affect property rights, and could be complex and costly to change.

Potential questions / further work

This option raises the following questions and potential for further work:

- Need to consider the costs (particularly given past inter-jurisdictional experience) and benefits of this.
- Need to consider the views of other jurisdictions.
- Consider if this a back-end issue or customer-facing issue, and the implications given this.
- Is this a material issue to market confidence and integrity, especially in the context of other issues raised?
- What do market participants think and want?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that while they appreciated the benefits and sought opportunities to ensure compatibility, and increase access to information and transparency across the Basin, they were:

- concerned about repeating unsuccessful past multi-jurisdictional efforts,
- uncertain of the materiality of the problem (particularly as it is not material for intra-state trade, which accounts for the majority of transactions) or the feasibility of the solution,
- already working with other Basin States to align new terminology being developed, e.g. on trade purpose categories and secondary market products,

- concerned that NSW water users are used to terminology used in NSW that is aligned with the state's licensing framework, and changing this would increase complexity / uncertainty, and
- concerned that it may be costly for the potential benefits.

2.4.3. Aither's current view

Aither supports interstate systems and registers being able to 'work with each other.' However, that is different to whether 'harmonisation' of terminology is required. Harmonisation might be good in theory, but it has many issues in practice (particularly in a market that is already in existence). It is unclear that harmonisation would bring benefits to current users who generally understand the products and terminology relevant for them. Changing this terminology would potentially be counterproductive for users, despite potentially bringing benefits to those overseeing the market, or for those frequently transacting across several state jurisdictions.

Furthermore, while the failed previous attempts at harmonisation are not a reason to not pursue it, the history of this reform largely reflects the fact that individual states are responsible for their own licensing regimes.

Detailed review of options – *Practical changes need to be underpinned by clear and comprehensive mandates to provide efficient trade services and high-quality information to market participants*

2.5. Mandate to keep a register of trades

2.5.1. ACCC's proposal

The ACCC has identified the option: '*Each Basin State should be given a clear legislative mandate to keep a register to record all entitlement trades and all allocation trades.*'

The ACCC's rationale for this recommendation appears to be that: '*updating state water legislation is necessary to mandate the collection, verification and recording of information such as price, trade type, product type, agent/broker name and date of agreement would greatly improve the quality of water register data.*'

2.5.2. Key considerations

Potential impact

It would seem that most of the Basin States already have the appropriate mandate and deliver on it accordingly. However, to the extent that they do not have that mandate, or do not deliver on it, the collection of further information could be beneficial for market participants. Clearly bridging any agreed gap between current and appropriately mandated arrangements may result in expense for Basin States.

Considering current arrangements where such mandates and registers exist, price reporting may be improved, if approval authorities have a mandate to gather evidence on prices paid. Furthermore, if the specification of state registers was standardised, this could provide a more consistent experience for market participants.

Potential questions / further work

This option raises the following questions and potential for further work:

- Need to consider the legislative mandates that already exist.
- What is missing from current arrangements? (IIO register options are provided separately)
- Are there particular states or registers of concern?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- it is unclear what the problem is from a NSW perspective, what is missing currently and why it is necessary, noting this may be more relevant to other States, and
- NSW has existing legislation requiring this.

2.5.3. Aither's current view

Aither supports robust register arrangements, however it is unclear what 'mandate' or register function is missing, and therefore how material the problem is in NSW. To the extent that this option ultimately promotes the collection of better and more complete transaction data, that is likely to be beneficial to market operation.

2.6. Mandate to provide information services based on registry data

2.6.1. ACCC's proposal

The ACCC has identified the option: '*Each Basin State water register should be given a clear legislative mandate to provide information services based on registry data, and clear publication requirements should be specified (although detailed requirements should be specified in delegated legislation such that they can be changed from time to time as needed).*'

The ACCC's rationale for this recommendation appears to be the concern that state legislation does not (except in Victoria) provide a mandate for approval authorities or water registers to provide information services.

2.6.2. Key considerations

Potential impact

The ACCC suggests that Basin States should implement the Victorian approach of having a 'mandated' role for trade approval authorities and water registers. This may lead to more information and data being generated by states and provided publicly. It could also provide further or continued certainty that state registers would be maintained and have clear requirements.

Potential questions / further work

This option raises the following questions and potential for further work:

- What further publication requirements would be specified?
- What is missing? Does this impact the states' capacity as approval authorities / register managers?
- Is this problematic for approval authorities?
- Are they actually stepping outside their mandated roles by trying to respond to stakeholders' needs for improved data and greater transparency?
- What user-needs analysis has been done, or should be done?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that it is:

- unclear what the problem is, what is missing, why it is necessary and what is currently done, and
- worth considering further however, if there are clearly identified issues.

2.6.3. Aither's current view

Aither supports legislative certainty in relation to information services from register data, although it is not clear that this addresses existing problems with market confidence and integrity so it may not be a high priority. Aither has not considered whether the existing legislative or regulatory requirements for states to provide information services from registers are already sufficient. Most information is currently available from registers and states appear to be committed to improving information. Further detail on the specifics of this recommendation could be requested from the ACCC to determine the merits of change.

2.7. Establish comparable IIO registers

2.7.1. ACCC's proposal

The ACCC has identified the option: '*IIOs should be required to establish and maintain comparable registers for both temporary and permanent trades, within, out and into their networks. This might occur in partnerships with state agencies.*'

The ACCC's rationale for this recommendation appears to be to increase the transparency of water trade within IIOs – which are large water users / markets in NSW (i.e. Murrumbidgee, Murray and Coleambally Irrigation have large licences and represent many individual water users within their valleys).

2.7.2. Key considerations

Potential impact

The incorporation of 'within-IIO' trade data into the public domain would increase the breadth and depth of available water market data. The change may require or result in:

- changes to NSW regulation covering IIOs (licences, etc.)
- increased costs for IIOs, and therefore their members (pending the investment required, some IIOs or members may not have sufficient resources, or view it as a priority use of their resources).

The IIOs, the NSW agencies and the BoM would have to ensure that this does not result in duplicated or inconsistent reporting of some trades (e.g. trades off or onto the IIO licence are already picked up in state registers).

Potential questions / further work

This option raises the following questions and potential for further work:

- Would (or how would) NSW direct IIOs to do this?
- What are the views of IIOs on this issue and would it require the government to mandate this?
- Would the mandate to develop registers be provided at Commonwealth or state level?
- How or would trades be reported any differently given external trades are all off of or onto the IIOs licence(s)?
- What information is currently not accessible to the NSW Government or other water users outside IIOs?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected support for greater transparency of IIO trades particularly in relation to price reporting (which would be beneficial for all market participants given the number of users and volume of water within IIOs). In practical terms this would need to consider:

- the costs and benefits, and consideration of cost-recovery issues,

- the practicalities and mechanics – and comparison with augmenting current state register information (rather than establishing additional sources of information or new registers),
- what is / not available currently and what could be added to public information (seeing as the NSW Government already has access to some IIO data)?

However, noting the practical steps above, there is strong support for improving transparency of IIO trades.

2.7.3. Aither's current view

A significant amount of allocation and entitlement trade is undertaken within IIOs, particularly those in NSW. In Aither's view there are likely benefits to the broader market in having readily accessible allocation and entitlement trade data from within IIOs in the same format, timeliness and accuracy as state register data. This is currently a major gap in the market and many market participants have raised significant concerns about this issue over many years. We recommend that this becomes a high priority and 'no regrets' reform that is implemented at the state level.

In practical terms, there is a question whether new registers are required, or whether the NSW Government needs to just ensure that IIO information is included in its current register(s).

Pending the model for collecting and presenting the information, there may also be cost recovery issues, e.g. if IIOs invest in separate registers would non-IIO users be expected to contribute to the cost (both the initial cost and also the on-going use). In this case, a co-ordinated approach to funding and system improvements may be beneficial.

2.8. Update Water Regulations for trades of irrigation rights

2.8.1. ACCC's proposal

The ACCC has identified the option: '*Update Water Regulations 2008 (Cth) to more clearly specify data reporting requirements for trades of irrigation rights.*'

The ACCC's rationale for this recommendation appears to be that although the BoM provides some transparency over IIO internal trades, this data may not be reliable as the lack of specificity in the Water Regulations leads to different interpretations taken by the IIOs in what they need to provide.

2.8.2. Key considerations

Potential impact

- As above, better IIO trade data would increase the breadth and depth of available water market data. The change may result in minor changes for IIOs in their reporting and the BoM in its receipt and use of IIO data.
- Improved transparency of trades within IIOs

Potential questions / further work

This option raises the following questions and potential for further work:

- What problem(s) is this change addressing?
- What updates are actually proposed?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested:

- support for greater transparency of IIO trades so willing to further consider,
- uncertainty as to the materiality, and
- recognition that it is a matter for Commonwealth (being Commonwealth regulations).

2.8.3. Aither's current view

Aither supports states and other market participants having access to 'within-IIO' trade information. It is unclear how material this specific problem is (i.e. problems with the specification of data requirements for the BoM) – noting however that the proposed solution should be reasonably low cost for the Commonwealth and for IIOs (as the Water Regulations already exist and minor modifications may not be difficult to achieve).

2.9. Ability to register contracts with water registers

2.9.1. ACCC's proposal

The ACCC has identified the option: '*Create the ability to register contracts with water registers, and/or annotate allocation trades conducted under a contract, with an identifier such that all allocation trades arising under one contract can be identified together.*'

As noted for option 2.2 (Update trade application forms to capture further information), the ACCC's rationale for this recommendation appears to be to obtain further information on:

- the timing of trades, 'struck' prices and delays in reporting market movement, and
- the role of forwards, leases, carryover parking and other more complex arrangements.

2.9.2. Key considerations

Potential impact

In addition to the potential impacts noted in option 2.2, this option may be costly to implement or slow down the process of allocation trade, or establishment of the forwards, leases, or carryover parking.

Also, as the ACCC notes, this option may have privacy or commercial-in-confidence issues to manage if the details of the contract were to be shared.

Potential questions / further work

In addition to the potential questions / further work noted in option 2.2, there could be further consideration of the impacts and a comparison with other options which may exist to address the specific problems that the ACCC has raised.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected the need for further consideration of this option, noting that:

- the key issue is being able to identify contracts in order to exclude price reporting of these products from spot market analysis,
- NSW has implemented a solution to address the above issue, by requiring users to identify forwards, leases, carryover parking and other secondary market products on trade application forms, and
- there needs to be more consideration as to how this would work in practice, and the benefits of doing so – particularly to avoid burdensome reporting that does not provide material benefit.

2.9.3. Aither's current view

Aither strongly supports ensuring that the "reasons for trade" includes where the transfer is linked to leases, carryover parking, forwards, part of a "wet" entitlement trade, or other products. Having these types of transactions identified would generate significant benefits for the market (assuming this is separately reported in published trade data or effectively removed from spot market prices), even if

they were allowed to be processed as zero-dollar trades where there were challenges in reporting an exact price (e.g. in relation to leases and “wet” entitlement transfers, when the effective unit price may be difficult to determine, the zero value would be associated with a specific trade sub-type). Market conduct and integrity issues with contracts and the accuracy of reporting could potentially be addressed through compliance audits under an intermediary licencing scheme.

2.10. Standardised single party identifiers across the Basin

2.10.1. ACCC's proposal

The ACCC has identified the option: '*Introduce standardised single party identifiers across the Basin, for example using ABNs.*'

The ACCC's rationale for this recommendation appears to be that the current information base makes it challenging to observe individual trader activity, in the absence of 'clear, consistent and mandatory identity checks.'

2.10.2. Key considerations

Potential impact

The single identifier may increase visibility of individual trade activity, though may also result in the proliferation of separate, but related trading entities. There may be privacy, commercial-in-confidence and other corporate reporting issues to be resolved but these are hard to determine and quantify without further consideration of the specific design and details of the option.

Potential questions / further work

This option raises the following questions and potential for further work:

- Would the information be made publicly available (including to competitors)?
- Or would it only be available to a regulator?
- How would 'related', associated, affiliated parties be managed?
- To what extent would current analysis of trade activity on / off specific WALs satisfy the objective?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected the need for further consideration of this option, noting that useful market intelligence could be revealed – at least to licensing authorities and regulators, if not publicly.

2.10.3. Aither's current view

Aither notes that single party identifiers may have merit in principle, noting the potential for an entity to establish numerous other related parties and also noting the key difference between making such information available to the public, as opposed to just a regulator or licensing authority (which seems to be more appropriate). It may require the support of other initiatives and be part of a broader suite of reforms. In any event, collecting the data for regulatory purposes but not publicly reporting ABNs for each trade seems to be a potentially useful option but requires further detail and explanation from the ACCC in relation to the benefits this would provide.

2.11. Standards and agreed processes for trade processing across the Basin

2.11.1. ACCC's proposal

The ACCC has identified the option: '*Standards and agreed processes for processing trade applications and recording and disseminating trade data should be mandated and consistent across jurisdictions. These should apply to all IIOs and Basin State approval authorities. Further, there should be standardised record-keeping and continuous disclosure rules placed on exchanges and brokers.*'

The ACCC's rationale for this recommendation appears to be to address inconsistent processes – both interstate and across different types of transactions (e.g. groundwater as opposed to regulated in NSW) – that complicate and slow down transactions. There is also a question of the consistency of IIO trade processing – particularly when it involves non IIO parties to a transaction.

2.11.2. Key considerations

Potential impacts

Standardisation of trade processing across the Basin would be a major reform that could lead to a simpler, common system. It would however be costly and disruptive (depending on the model that was chosen) to implement. Even amendments to current processes to make them more compatible may result in significant costs and initial disruption.

Longer term, standardisation could improve interstate processing times and confidence – but potentially at increased cost for approval authorities and also potentially to the detriment of intra-state trade times, and costs to users given cost-recovery and pricing arrangements.

While the Basin States generally record and disseminate similar trade data, it would be useful for the presentation of that data to be done in a co-ordinated way around the Basin (i.e. comparable timeframes, increments and units) to allow ease of comparison. While this may result in some additional initial cost, presumably the same underlying information is largely collected by each jurisdiction.

The requirement for standardised intermediary reporting may be more relevant to theme one of the Interim Report (and this review) – 'Conduct of market participants' – and could be mandated as part of new intermediary regulation. Again, this may result in increased costs for intermediaries which may be passed through to their clients – market participants.

Potential questions / further work

This option raises the following questions and potential for further work:

- Need to consider the costs (particularly given past inter-jurisdictional experience) and benefits of this?
- Need to consider the practicalities and feasibility? For example:
 - what differences are there in the trade information provided publicly by each state?

- to what extent are the various jurisdictional trade processes the product of legislation (and therefore harder to amend) as opposed to administrative process (in which case, some standardisation may be more easily achieved)

[Additional insights from NSW Government and WaterNSW subject-matter experts](#)

Consultation with NSW Government and WaterNSW subject-matter experts suggested support for:

- periodic reviews of trade processing times,
- improving customer experience, and
- simplicity and improved inter-jurisdictional processes.

However, recognising the current state requirements, more detail would be required to fully assess the merits of any proposal for significant changes.

[2.11.3. Aither's current view](#)

In Aither's view, the majority of trades in the southern connected Basin are processed to a reasonable standard and within reasonable timeframes. We support improving the speed and simplicity of trade processing / approvals, but note that transparency and shorter processing times are more important than having the same processes – given the different jurisdictions (or water resource and product types) involved.

There are areas where trade processing arrangements and times could be improved, particularly in relation to IIOs, groundwater trades and some entitlement trades (particularly where revisions are required). While there should be an on-going focus on improving processing times, consideration of more standardised processes could be dealt with over the longer term or as part of other reforms.

Importantly, improving trade processing times relates to some of the more complex digital options. If trades were processed quickly and then reported in state registers that were linked in real time to a single portal of information from each state, then this may significantly reduce the need for more complex digital solutions that focus on pre-trade information (i.e. buy sell orders and non-approved or non-binding agreements to trade).

2.12. Harmonised trade application fees

2.12.1. ACCC's proposal

The ACCC has identified the option: '*Basin States should work towards harmonising trade application fees for allocation trade in the Southern Connected Basin, while also recognising the NWI [National Water Initiative] principles for cost recovery.*'

The ACCC's rationale for this recommendation appears to be to ensure that market participants enjoy 'a level playing field' (competitive neutrality) with consistent fees.

2.12.2. Key considerations

Potential impact

Consistent interstate allocation trade fees would create a 'level playing field' – noting that the amount charged by licensing authorities for trade processing fees is very small in comparison with the cost of water in a typical transaction.

However, assuming that the Basin States' fees reflect their costs, this option could result in states over or under recovering costs in order to meet a defined level of fee / service. This option may also result in changes in fees paid by water users.

Potential questions / further work

This option raises the following questions and potential for further work:

- It is unclear how this recommendation could be met in practice. Processing costs are likely to differ so any standardisation of fees is likely to be contrary to the cost reflective pricing principles of the NWI.
- States could investigate fees that differ substantially for the same/similar services and consider whether there are ways they could be brought into greater alignment (e.g. is it fee structure and approach, or underlying costs)
- Potentially investigate particular types of transactions or water resources that could have more harmonised fees.
- Need to consider how States would recover their actual costs if any significant fee changes were introduced (which resulted in divergence from actual costs).
- Potentially investigate underlying cost drivers for 'outlier' fees or charges and whether efficiencies can be found that might reduce costs.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that NSW is currently reviewing different costs between regulated, unregulated and groundwater transactions with a view to harmonising costs, but supports cost recovery to reflect the cost of the process, rather than seeking consistent transaction costs across states.

2.12.3. Aither's current view

In Aither's view, it would be difficult to harmonise the cost of different water resources and state approvals systems in a cost reflective way, i.e. how could the different costs faced by states and delegated entities be reconciled?

Ultimately, there is also a question of materiality and value in this option, as it seems unlikely that the differing transaction costs would impact market behaviour – as they are minimal in comparison with the actual 'commodity' cost (noting however, the considerably higher fees in South Australia). The more important issue for market participants is the extent to which reforms will increase trade processing and other costs to water entitlement holders and users.

2.13. Require prices to be reported for all tradeable water rights

2.13.1. ACCC's proposal

The ACCC has identified the option: '*Basin Plan trading rule 12.48 should be revised to require prices to be reported for all tradeable water rights; that is, including irrigation rights and water delivery rights, not only water access rights.*'

As for options 2.7 and 2.8, the ACCC's rationale for this recommendation appears to be to improve transparency of IIO trade activity.

2.13.2. Key considerations

Potential impact

As for options 2.7 and 2.8, better IIO trade data would increase the breadth and depth of available water market data. The change may have implications for Commonwealth (and perhaps state) data collection and reporting, including registers (additional data points to report). Additional reporting requirements may increase costs to users (unclear how much extra cost would be incurred).

Potential questions / further work

- How material is this in terms of market integrity and confidence?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested:

- support for greater information and price disclosure for all market products and this being reflected in the Basin Plan,
- support in principle, in relation to delivery rights, noting that this may only be relevant in certain areas of the state, and
- it is ultimately a decision for the Commonwealth Government.

2.13.3. Aither's current view

Aither supports this further reporting in principle, noting that delivery rights markets are currently very thin, non-existent, or not relevant in many areas outside IIOs. It is unclear whether this is a material problem – noting however that the solution is likely to be low cost and that the principles of price disclosure should apply across all tradeable products.

Detailed review of options – *Digital technologies offer the opportunity to streamline trade services, at the same time as improving information quality and availability*

2.14. Comprehensive and open digital protocol to enhance interoperability

2.14.1. ACCC's proposal

The ACCC has identified the option: '*A comprehensive and open digital protocol to enhance interoperability between Basin State approval authorities and registers, IIOs and exchanges, with the ability to securely transmit data, seamlessly interface between private exchanges, IIOs, trade approval authorities and registers, execute instructions, and automate collection, cleaning and publishing of water market information.*'

The ACCC's rationale for this recommendation appears to be to seek a technology fix to the disparate systems and forms of data and information that have developed across (and within) the Basin States-in the absence of a single / centralised repository.

2.14.2. Key considerations

Potential impacts

Presumably the intention of this option is to not disrupt current (largely state-based) arrangements, yet improve the interoperability between (and within) states. In theory this should deliver benefits to government and market participants, but would be balanced by the development and implementation costs and effort required to establish it.

The inclusion of brokers and exchanges through 'broker portals' or exchange linkages could provide greater accessibility to current market information and may increase the rigour of transaction reporting – noting the need for approval authorities to maintain the integrity of their registers.

Potential questions / further work

This option raises the following questions and potential for further work:

- It is unclear whether an open digital protocol is the best solution.
- To the extent that there is shared content or infrastructure – who would own it?
- Is it just a consolidation in real time of all the state registers to enable search and data analysis?
- What is the role of the BoM?
- What is the status of the number of existing funded projects that are aimed at delivering this (or a similar) outcome?
- With respect to broker and exchange access, are there lessons from the Victorian broker portal experience?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected support for greater interoperability, but questioned the cost / benefit of this solution. Pending the assessment of costs and benefits, it may be a longer-term option that requires further consideration.

2.14.3. Aither's current view

Reflecting the insights from NSW Government and WaterNSW subject-matter experts, Aither supports greater interoperability and faster processing. Noting the role of the BoM (and any market regulator), greater interoperability is likely to be a preferred solution for state governments (as opposed to centralising responsibility with the Commonwealth).

As for all of the 'digital technology' options noted in this theme, this option may warrant further consideration, but as a longer-term action after more immediate and material issues are prioritised.

2.15. Single information portal for publishing water availability and trade information

2.15.1. ACCC's proposal

The ACCC has identified the option: '*A single information portal for publishing water availability and trade information, which collates data from multiple sources, but does not facilitate trade.*'

As for the option above, the ACCC's rationale for this recommendation appears to be to consolidate the disparate systems and forms of data and information into a single portal (as opposed to housing and generating it) – to provide a 'single point of truth' for water resource and market information.

2.15.2. Key considerations

Potential impacts

Again, as for the option above, the intention of this option is to not disrupt current (largely state-based) arrangements, yet improve access to information. Again, in theory this should deliver benefits to government and market participants, but would be balanced by the development and implementation costs and effort required to establish it – noting the likelihood of duplication of current arrangements (especially the BoM's existing roles).

Relevantly, similar options have been pursued before for similar reasons but have been unable to provide the 'single point of truth'.

Potential questions / further work

This option raises the following questions and potential for further work:

- As above:
 - who would develop and then manage the portal?
 - what is the role of the BoM? and
 - what is the status of the number of funded projects that are aimed at delivering this (or a similar) outcome?
- Improvements could be made to existing sources of information, where targeted issues are identified.
- How would the work and investment already undertaken by NSW and other states be incorporated into a single information source not hosted by NSW?
- Need to consider the practicalities and feasibility (including issues such as privacy).

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected support for the intent, particularly with respect to improving access to real time information. However, delivery depends on the scope of the portal – particularly given recent work by DPIE - Water and WaterNSW to produce the Trade Dashboard and Water Insights portal, both of which are intended to continue to deliver enhancements and increased functionality for users in the future.

The NSW Government has made public statements supporting improved transparency around the information contained in water registers and providing better access to clear and easily understood information, using a consistent national approach. This option may be an appropriate means to achieve this, although further consultation and consideration would be required.

2.15.3. Aither's current view

In Aither's view, while market and resource data can appear fragmented and may in some cases have variable quality, user needs analysis needs to be undertaken for market participants – as we suspect that many have access to the information that they require.

Having said that, less sophisticated market participants and potentially the wider public would benefit from better, more user-friendly, real-time and consolidated water information (including IIO data). Additionally, the market would benefit from improved (or at least consolidated) information on supply and demand within the system, including between zones. This additional 'within-season' information would assist in decision-making through the course of the water year (i.e. if water use could be tracked, it would assist with forecasting availability and market activity within a water year).

Pending the scope of any such portal, this option may require significant time and investment given the number of different sources, websites, apps, etc. and the role of the BoM is once again very relevant. However, the resulting improvements in transparency and market education may reduce the need for the major changes to water registers and trading platforms that have also been proposed (see further below).

As for all of the 'digital technology' options noted in this theme, this option may warrant further consideration, but as a longer-term action after more immediate and material issues are prioritised.

2.16. A spot market and real-time automated matching

2.16.1. ACCC's proposal

The ACCC has identified the option: '*A spot market and real-time automated matching of buyer and seller offers, similar to the National Electricity Market*'

The ACCC's rationale for this recommendation appears to be to promote transparency (particularly market depth) and address data quality issues. It identifies the National Electricity Market (NEM) as a potential model as it 'also takes into account the physical delivery of energy and has markets for ancillary services to manage demand and supply constraints.'

2.16.2. Key considerations

Potential impacts

As the ACCC notes, this option would require considerable reform (particularly around governance) and would result in significant establishment and operating costs. However, it would be expected to improve transparency and data quality (particularly price and volume discovery). It would increase the complexity of the market, noting that many market participants are familiar with and utilise the current allocation trade 'spot market.'

Potential questions / further work

This option raises the following questions and potential for further work:

- Would this actually address identified problems?
- If so, to such an extent that the investment and reform would be justified – particularly compared with other less significant options?
- What lessons could be drawn from the NEM to develop a 'lite' version?
- Are electricity and water actually comparable in this context, given the variety of different water resources and products, as compared to the homogeneity of electricity?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts reflected that while this reform is not considered a current priority, it is a longer-term option that is worth exploring.

2.16.3. Aither's current view

In Aither's view, while this option should achieve the objectives of increasing transparency and data quality, other options in this category may have more merit (e.g. single exchange) and there are more pressing market issues to address first.

As for all of the 'digital technology' options noted in this theme, this option may warrant further consideration, but as a longer-term action after more immediate and material issues are prioritised.

2.17. A single exchange platform for posting and matching trade offers

2.17.1. ACCC's proposal

The ACCC has identified the option: '*A single exchange platform for posting and matching trade offers by creating a single mandatory online platform for matching buyers and sellers.*'

The ACCC's rationale for this recommendation appears to be to promote price discovery, data quality, and information on market depth – as all offers would be lodged and trades agreed in a single place.

2.17.2. Key considerations

Potential impacts

The creation of a single exchange could simplify and reduce the elements of the market, by requiring all trades to go through a single platform. It would be a significant reform (noting that some exchanges currently exist) and would likely create a monopoly service requiring regulation, while also reducing (or modifying) the current role of brokers.

Potential questions / further work

This option raises the following questions and potential for further work:

- Would off exchange trade be allowed?
- How would transfers between accounts owned by the same entity be managed?
- If so, how would price discovery and reporting work for those trades?
- Would the exchange be publicly or privately owned and managed?
- What would be the impacts on existing intermediaries?
- How would monopoly power of the exchange be managed?
- Need to consider the practicalities and feasibility (including issues such as privacy).

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts acknowledged the potential benefits and value of considering it further in due course, but noted that:

- it is not currently a priority, and
- it raises the question of the role of government in providing this service.

2.17.3. Aither's current view

In Aither's view, a single exchange could be useful for the market as it could address many issues or concerns with brokers and intermediaries, could aid price discovery and depending on how it was implemented, would likely get much closer to the 'single point of truth' on prices. It could also allow states to maintain their water registers 'underneath it', so would be less likely to impact a range of other water management matters.

The option could have merit in the medium to longer term, but would raise various issues of its own. The costs and impacts on current market arrangements and participants would also need to be

considered and balanced against the benefits, with consideration given to the role of governments vs the private sector in establishing or running exchange(s).

As for all of the 'digital technology' options noted in this theme, this option warrants further consideration, but as a longer-term action after more immediate and material issues are prioritised.

2.18. An ASX-like approach of a single clearinghouse

2.18.1. ACCC's proposal

The ACCC has identified the option: '*An ASX-like approach of a single clearing-house for administering trade (but connecting via interoperability protocols to trading platforms as overlays and different Basin State registers underneath).*'

The ACCC's rationale for this recommendation appears to be to promote harmonised trade fees and processes, while also improving visibility of trade behaviour and compliance. In contrast to having a single exchange, this option would allow multiple exchanges to remain.

2.18.2. Key considerations

Potential impact

The creation of a single clearinghouse, would simplify and reduce the elements of the market, but would preserve competition between exchanges. It would however prohibit 'off-platform' trade – e.g. more informal 'farmer to farmer' trades. The ACCC notes that this option could exacerbate problems with brokers rather than address them and could be an overinvestment in the context of the size of the water market.

Potential questions / further work

This option raises the following questions and potential for further work:

- As a first step, is agreement required that exchanges are the preferred model – given the reliance on exchanges for this option?
- What would be the impacts on existing intermediaries?
- How would monopoly power of the exchanges be managed, or competition between exchanges ensured?
- Need to consider the practicalities and feasibility (including issues such as privacy)?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts again acknowledged the potential benefits and value of considering it further in due course, but noted that:

- it is not currently a priority,
- it may result in additional complexity, and
- the trade volumes may not be sufficient to justify the investment in this approach.

2.18.3. Aither's current view

As for option 2.17 (above), in Aither's view, a single clearinghouse could be a useful development for the market in the medium to longer term– however the costs and impacts on current market arrangements and participants need to be considered.

As for all of the 'digital technology' options noted in this theme, this option may warrant further consideration, but as a longer-term action after more immediate and material issues are prioritised.

2.19. Distributed Ledger Technology which administers trade

2.19.1. ACCC's proposal

The ACCC has identified the option: '*Distributed Ledger Technology (DLT) which administers trade through smart contracts and also records all registry information.*'

The ACCC's rationale for this recommendation appears to be to promote a 'single overlay portal' that would deliver similar benefits to a single exchange or centralised register – while leaving much of the current state-based market infrastructure in place and simplifying the complexity of trade.

2.19.2. Key considerations

Potential impact

The use of DLT would be a significant change to the operation of Australia's water markets – noting that it is currently being explored and adopted in property and share markets. The use of DLT is reliant on significant foundational work (such as codifying rules and improving use data) – which could drive improvements in the market, but which would also be time-consuming and expensive before it could be implemented.

Potential questions / further work

This option raises the following questions and potential for further work:

- Is this a priority in the context of known problems with market integrity and confidence?
- The ACCC identifies a number of separate public and private sector initiatives that are exploring this option – how can that be best utilised to inform Government decision-making on this option?
- What further foundational work is required (e.g. codifying rules and improving use data) – and might this deliver sufficient benefits alone?
- What other relationships / dependencies are there – e.g. the use of 'smart contracts'?
- What are the user-needs and views on this transition?
- Need to consider the practicalities and feasibility (including issues such as privacy)?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts acknowledged the benefits for transactional confidence, but highlighted the fundamental changes and potential complexity of DLT.

2.19.3. Aither's current view

In Aither's view, while there may be compelling reasons for the adoption of DLT (as shown in other markets), there appears to be a significant amount of foundational work that would need to be undertaken before DLT could be applied to water markets. As noted above, this work may deliver sufficient improvements without implementing DLT – so a staged process would be required.

It is not clear that market participants are seeking this solution, nor that it delivers on immediate market issues.

As for all of the 'digital technology' options noted in this theme, this option warrants further consideration, but as a longer-term action after more immediate and material issues are prioritised.

2.20. A single common register

2.20.1. ACCC's proposal

The ACCC has identified the option: '*A single common register in which all water accounting for both trade and delivery (use) would be accounted for in the same, single system.*'

The ACCC's rationale for this recommendation appears to be to promote a 'single point of truth for historical trade', as it would result in:

- ownership and trade for all entitlements being stored in a single common register, and
- all water account transactions being reported to this register.

2.20.2. Key considerations

Potential impact

A single common register would be a major reform – noting that it has been attempted unsuccessfully in the past. While it would bring confidence to certain data and information, it would not address significant trade processing and transparency issues. The relationship between the single register and the various Basin State Registers (and legislative frameworks) would be potentially difficult to resolve.

Potential questions / further work

This option raises the following questions and potential for further work:

- Consideration of previously unsuccessful attempts?
- Need to consider the costs (particularly given past inter-jurisdictional experience) and benefits of this?
- Is this realistic based on existing state and Commonwealth constitutional responsibilities for water resource management?
- Need to consider the practicalities and feasibility (including issues such as privacy)?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested:

- support for improved market information – potentially similar to, or based on, the Water Insights and Trade Dashboard products that have recently become available in NSW
- however, similar approaches have previously been tried and failed (at significant cost), and
- there are significant complexities in integrating each of the State systems – on account of the differences between those systems.

2.20.3. Aither's current view

In Aither's view, while a more national approach could be considered in the context of options for more fundamental market design, there appear to be shorter term options that may deliver increased market confidence more quickly (such as some of the technology options noted above – which preserve state-based registers and processes). Finally, as for all of the 'digital technology' options

noted in this theme, this option may warrant further consideration, but as a longer-term action after more immediate and material issues are prioritised.

3. Improving market architecture

Summary of issues and options raised in the Interim Report

The ACCC uses 'market architecture' to refer to rules and regulatory settings that govern water supply (allocation), storage and delivery, trading and other operational decisions. The ACCC suggests that it involves setting the rules about how water can be traded and defines the elements necessary to manage water resources and create water markets.

Key elements under 'market architecture' include:

- the cap on resource usage,
- allocation policies,
- carryover policies,
- geographical trade rules (including inter valley and interstate),
- river operations requirements, and
- metering requirements.

Overall, the ACCC states that:

The design of the southern connected Basin market architecture has not kept pace with increasing trade activity, and the ACCC is seeking to identify options for reform.

Issues

In summary, the ACCC has raised the following issues:

1. Disconnect between the rules of the trading system and the physical characteristics of the river system (e.g. on-river delivery capacity scarcity, conveyance losses and adverse environmental impacts are not considered in the processing of trades that change the location of water use - except through 'blunt rules', such as limits on inter-valley trade/transfers).
1. The current operation of some market architecture elements is undermining confidence in the integrity of water markets and trade activity:
 - a. some of the assumptions on which the current architecture rests need to be reassessed, and
 - b. some of the current mechanisms are not working as well as hoped, and are having or could lead to unintended consequences.
2. Critical of allocation policies, IVT rules (or limits in general) and allocation policy for lower reliability entitlements (Vic LRWS and NSW GS).
3. There are 'missing markets' for storage and delivery capacity, which leads to ineffective operational, investment and trading decisions and inefficient allocation of water resources.
4. Questions some significant policy or management matters, including whether:
 - a. 'on river storage' and delivery infrastructure access should be bundled with water access rights,
 - b. storage operators should have such a high level of discretion in storage management and delivery decisions,

- c. significant differences between jurisdictions in certain policies are desirable or tenable (e.g. different allocation and carryover policy), and
 - d. conveyance losses should continue to be socialised.
5. Highlights various stakeholder concerns, such as:
- a. concerns around allocation policies, metering, carryover, deliverability and conveyance losses, IVT restrictions, and tagged trades, among other issues, and
 - b. concerns that river operations rules increase the risk of delivery shortfall and the water required for conveyance losses because of trade and the associated water deliveries.

Options

The ACCC has identified the following eight options to address these issues, which are reviewed in detail further below:

1. Improvements to policy transparency and consultation processes.
2. Alternative approaches for allocation and carryover policies.
3. The creation of formal markets for storage and delivery capacity.
4. Application of transmission loss factors to water deliveries in the southern connected Basin.
5. Removal of the exemption for grandfathered tags or removing entitlement tagging altogether.
6. Alternative and more dynamic mechanisms to manage inter-valley trades.
7. Changing all allocation trade to tagged allocation trade.
8. Improving consistency across Basin States' accounting and metering requirements.

Summary of Aither's review

Review of issues raised by the ACCC

The ACCC raises a number of very significant issues that have been the subject of intense scrutiny, and investigation, including by NSW Government, for a number of years (particularly over the past 3-4 years of drought in the Basin). These issues are the operation of allocation policies (available water determinations), carryover, delivery shortfall risk management and transmission loss factors – to name a few.

Strictly speaking, these issues are not just water market issues and, in many cases, would exist in the absence of the market. However, despite potentially being broader water management issues, each option either:

- seeks to remedy an issue that is affecting the market – particularly market confidence, such as allocation or carryover announcements, or
- provides a market mechanism as a solution, such as markets for delivery or capacity shares.

Therefore, the issues raised are largely material and important for the NSW Government (and other Basin States) to resolve – or at least develop policies on and actively communicate with water users to address concerns.

Review of options identified by the ACCC

Aither has analysed each of the eight market architecture options proposed by the ACCC, and in summary:

- There are significant opportunities to improve transparency, understanding and knowledge instead of necessarily pursuing change – notably in relation to current arrangements for allocation approaches, storage management or information, aggregate usage by zone/region (such as DPIE – Water's 'Usage Dashboard'³) and carryover.
- There are however a number of immediate practical reforms that should improve market operation, including ensuring equitable and efficient access to trade opportunities (e.g. the process for applying for and approving trade through the Murrumbidgee constraint and across the Barmah Choke).
- However, there are some options which may not be warranted, such as major changes to allocation approaches, reflecting transmission loss factors in individual trades instead of aggregate trade rules like IVTs, carryover and allocation trade – particularly where they fundamentally alter the nature of a market participant's property rights.
- In considering some of these more major changes, it is important to recognise the relationship between the market and the underlying hydrological realities. As a result, it may be that some of the options or ideas presented under this theme:
 - may not meet a cost benefit test, or
 - may not be appropriate (or superior) from a broader water policy and management perspective – again, as they may affect existing property rights.
- It is important to note the extent of NSW efforts made in recent months / years and which is ongoing, for example:
 - the significant metering reforms since 2018, and
 - the inter-jurisdictional Capacity Constraints Working Group to address challenges of delivery in the Murray.
- There are some significant policy questions for the NSW Government to consider – particularly in relation to delivery shortfalls and other river operations issues that the market is reliant upon. These issues have proven problematic to resolve in recent years and to an extent may have contributed to the ACCC's recommendation for improved Basin governance.

³ <https://www.industry.nsw.gov.au/water/allocations-availability/water-accounting/usage-dashboard>

Detailed review of options – *Improving market architecture*

3.1. Improvements to policy transparency and consultation processes

3.1.1. ACCC's proposal

The ACCC has identified the option: '*Improvements to policy transparency and consultation processes.*'

The ACCC's rationale for this recommendation appears to be to respond to extensive stakeholder feedback that the ACCC reflected in the Interim Report that various processes and decisions were not well understood by stakeholders – for example available water determinations, restrictions on carryover and options to address delivery shortfalls.

The focus of this recommendation is the communication of the policies and decisions – as opposed to the actual policies and decisions – which are the subject of the subsequent seven options in this theme.

3.1.2. Key considerations

Potential impacts

Improved development and communication of policies and decisions by Basin States (and the Commonwealth) could make a significant contribution to improving market confidence – such that announcements are more predictable and less likely to cause 'shocks.' Improved engagement with market participants should improve the knowledge of the market, which in turn should result in less confusion, misunderstanding and rejection of government decisions.

Potential questions / further work

This option raises the following questions and potential for further work:

- What specific issues, jurisdictions or changes require attention?
- Requires individual states to develop an overall 'narrative' for its water management decision-making, i.e. the interdependencies, trade-offs and overall goals.
- How to drive consistency of the narratives between different states and even within states.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts acknowledged the need for:

- greater policy transparency,
- improved consultation or engagement (noting that many stakeholders already feel 'over consulted'), and
- better communication to explain certain water management decisions.

Subject-matter experts suggested that NSW has already worked towards improving policy transparency with the development of the Water Insights Portal within NSW, and is actively working with other Basin States specifically in relation to channel capacity and delivery shortfall – such as the

June 2020 Ministerial Council (MinCo) agreement ‘that water users would be engaged so they better understand delivery risk.’ Furthermore, NSW is currently working with an independent expert panel and other Basin officials to establish a functional delivery framework for the River Murray.’

However, it was also recognised that recent drought conditions have tested management decisions, the operating pressures and costs on the system continue to increase (due to climate, changing usage patterns, trade, etc.). Rules are codified within water sharing plans and generally offer limited discretion.

Subject-matter experts also recognised:

- the new and constantly changing communications environment, but the continuing importance of local face-to-face communication, and
- the need for efficient and responsive engagement.

3.1.3. Aither’s current view

Aither supports this option, noting the need for the identification of the key issues from a stakeholder / market participant perspective. This option repeats messages from various related reviews over the last 1-3 years, and Aither agrees that improved development and communication of policies and decisions could make a significant contribution to improving market confidence (noting that practices and processes may not actually change, but rather would be better understood by those potentially affected by them).

On-going, structured, well-governed and systematic stakeholder and community engagement processes covering all water policy and management issues (not just markets) could deliver significant benefits to water users and the public more generally.

3.2. Alternative approaches for allocation and carryover policies

3.2.1. ACCC's proposal

The ACCC has identified the option: '*Alternative approaches for allocation and carryover policies, such as continuous accounting and capacity sharing.*'

The ACCC's rationale for this recommendation appears to be to consider whether there are other ways of managing the water resource, particularly given the pressure placed on allocation and carryover policies over the past three years of low in-flows.

3.2.2. Key considerations

Potential impacts

There are a variety of approaches for both allocation and carryover in place in different NSW valleys, therefore change would be complex and may not be justified (question of user needs / demand for change). Furthermore, major changes could alter existing property rights, or at least user expectations and could result in 'push-back', complaints, or legal challenges (e.g. particularly where entitlements have been purchased based on the basis of current carryover rules).

Potential questions / further work

This option raises the following questions and potential for further work:

- Further or continued work required to understand and communicate the drivers of changes in reliability and how issues like state sharing affect end user allocations.
- Further consider potential erosion of property rights.
- Address information and knowledge issues regarding carryover.
- Opportunity to consider forfeit rules (which differ across valleys in NSW).
- Opportunity to establish evidence base to test negative perceptions.

Additional insights from NSW Government and WaterNSW subject-matter experts

As above, consultation with NSW Government and WaterNSW subject-matter experts acknowledged the priority need for greater policy communication and the provision of information to market participants in order to support high levels of transparency and understanding. However, NSW has investigated these issues before and found majority support for current arrangements – being the product of long-term debate and development. Given the long period of time in which these positions have been settled, subject matter experts noted that:

- the current settings seek to balance strongly opposing positions held by water users, and
- these issues and solutions cannot be considered in isolation, i.e. the system has been set up holistically, with full consideration of the implications and impacts across all water management.

Given the variety of water resources in NSW it was noted that it would be unlikely to find a universal solution for all systems or to please all users. Additionally, recent drought conditions have tested management decisions, and physical limits in a way that does not occur during wetter conditions

(e.g. reduced ability to actually deliver water in certain systems, even if water is carried over and in water user accounts).

3.2.3. Aither's current view

Aither does not support substantive changes to the current allocation and carryover approaches without detailed assessment of the impacts of alternative options and clear evidence of a case for change (including a robust economic consideration of costs and benefits). Noting that transparency and communication of current arrangements could be improved, it is unclear what benefits these changes would bring.

Furthermore, most Basin States have recently reviewed carryover policies, and as a result some have made minor adjustments in recent years. Overall, given this background, in our view the focus for NSW and other states should be to ensure that allocation and carryover policies are clear, accessible, transparent and supported, including making sure that market participants are confident that carryover policies aren't driving third party impacts on reliability of entitlements.

3.3. The creation of formal markets for storage and delivery capacity

3.3.1. ACCC's proposal

The ACCC has identified the option: '*The creation of formal markets for storage and delivery capacity*'.

The ACCC's rationale for this recommendation appears to be to explore the further unbundling of property rights and creation of additional markets – particularly in the southern connected Basin.

3.3.2. Key considerations

Potential impact

This is a major and complex reform, that could not be applied to all systems, as it is mainly relevant to regulated surface water systems and storages. It would be a complex and time-consuming reform to design and implement and it would be unlikely that the NSW Government could find universal approaches to apply to (or justify in) all NSW systems. There would also be increased complexity when cross-jurisdictional issues are involved particularly in the southern connected system (e.g. for shared storages).

This option needs careful consideration to consider the impact on property rights of existing market participants (e.g. storage capacity rights vs current carryover approaches).

Potential questions / further work

This option raises the following questions and potential for further work:

- Better approaches to sharing capacity through key constraints could be undertaken (and may already be occurring).
- Costs and benefits of options to implement these types of changes could be assessed.
- Potentially 'unfinished business' from earlier water reforms – with mechanisms contemplated during the development of the *Water Management Act 2000* (NSW).

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts:

- supported greater policy transparency and information to market participants,
- highlighted that NSW has undertaken work on delivery rights over several years without implementing formal markets, in part due to the significant complexities and resourcing involved and the successful use of alternative operational levers to deal with delivery congestion. However, NSW is open-minded about further exploration of the potential for delivery rights in highly constrained areas such as the Murray across the Barmah Choke,
- noted that legislative provisions may exist for a delivery rights approach, but users in some systems have pushed back on change,
- noted the potential adverse impacts on productive water use in the NSW Murray. In the Murray, Victoria drives 80% of demand below the Barmah Choke. Introducing a market-based delivery approach could see delivery rights held by NSW water users quickly sold to Victorian water users resulting in a significant permanent reduction in the NSW share of delivery capacity,

- noted that NSW aims to support, grow and protect demand in proximity to its irrigation districts, which have received significant infrastructure investment to ensure they deliver water reliably and efficiently,
- reflected that NSW may not have the same imperative for delivery markets as other states,
- noted that specific constraints for the delivery of environmental water include the Barmah Choke, Marebone Break in the Macquarie and some small channels in the Gwydir, and
- noted that protections for planned environmental water, and other water in the system that has environmental benefits, needs to be considered to ensure that environmental recovery volumes are not undermined.

Overall, subject-matter experts observed that implementing storage shares in NSW is unlikely to be cost-effective and may not be feasible. It is likely to require a joint approach with Victoria in the shared Murray system.

Implementation of delivery shares requires further consideration and potentially development of a NSW position, noting that the diversity of NSW system types and the likely cost benefit analysis means that major change is not supported outside the southern connected Basin at this stage.

3.3.3. Aither's current view

In Aither's view, the better sharing or allocation of delivery capacity constraints is a material issue in some systems (notably the Murray) and therefore it is important that the current inter-jurisdictional discussions lead to a timely resolution of this matter. However, current:

- carryover rights appear to generally be well accepted and understood by market participants, and
- private products and services already exist which perform the 'trade in storage rights' function, such as 'carryover parking' products.

Overall, the delivery shortfalls risk issue would benefit from clear and transparent governance processes and public communication to ensure more timely and effective resolution of the matter.

3.4. Application of transmission loss factors to water deliveries in the southern connected Basin

3.4.1. ACCC's proposal

The ACCC has identified the option: '*Application of transmission loss factors to water deliveries in the southern connected Basin.*'

The ACCC's rationale for this recommendation appears to be to respond to concerns that current water delivery approaches are leading to:

- increased socialised conveyance losses rather than attributing losses to those involved in the relevant trades,
- environmental damage through sensitive river reaches, and
- increased delivery risk.

3.4.2. Key considerations

Potential impacts

This option has the potential to add significant complexity to trade arrangements and accounting systems, as it would require determining loss factors for different types and locations of trades (of which there could be many combinations). Furthermore, it could impact on the value of property rights of existing market participants.

Potential questions / further work

This option raises the following questions and potential for further work:

- Substantiate the materiality of losses at the 'retail' (individual trade) level, and given this, the costs and benefits of pursuing this option.
- Opportunity to better communicate the more significant 'over-bank' losses.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- NSW is currently investigating transmission losses in relation to water recovery, which is unrelated to transmission loss factors,
- applying loss factors to the delivery of trade has the potential to add significant complexity to trade arrangements and accounting systems (as losses are dynamic, changing over location and time, as a result of trade volumes, distance and variable physical and climatic conditions),
- introducing loss factors could also impact on the value of property rights of existing market participants, and therefore may not be supported by NSW water users,
- the naturally high variability of losses coupled with evolving water user behaviours (including the delivery of environmental water), makes it extremely difficult to isolate and assign specific delivery costs to transactions, and is probably unwarranted given that delivery costs (transmission losses) in the Murray remain within historical patterns and reasonable operational expectations,

- to date, the considerable complexity and cost associated with developing a transaction-based loss charge to water movement has not been warranted. Rather, the significant benefits of having access to a trading framework has, for most water users, far outweighed the shared cost of its provision, and
- NSW is seeking to deliver cost-effective sharing of operational costs equitably across water users. It is currently looking in the Gwydir at the feasibility of sharing the 'losses' budget between environmental water users and consumptive water users.

3.4.3. Aither's current view

In Aither's view, there needs to be greater clarity and certainty about any evidence of the link between downstream trade and increased transmission losses. Even if downstream trade is materially increasing transmission losses (and we understand this is unlikely based on the MDBA's recent report on losses), then work needs to be undertaken to assess a range of potential reform options. Adding a transmission loss factor onto individual trades is only one such option and it has obvious drawbacks such as being very complex to administer. Aither understands that the MDBA has been investigating these issues. In our view, the evidence base should be resolved to settle whether any further action is required and results should be communicated effectively by all parties.

3.5. Removal of exemption for grandfathered tags, or tagged trade

3.5.1. ACCC's proposal

The ACCC has identified the option: '*Removal of the exemption for grandfathered tags or removing entitlement tagging altogether.*'

The ACCC's rationale for this recommendation appears to be, with respect to:

- grandfathered tags – to enable more equitable access to IVT limits by all parties, rather than favouring those with grandfathered trades and enabling IVT balances to go negative, and
- tagged trade – to consider the historically difficult issue of accounting for the physical implications of entitlement trade.

3.5.2. Key considerations

Potential impacts

The removal of grandfathered tags could standardise entitlement trade rules and could reduce the potential for significant third-party impacts particularly to Murrumbidgee water users, however removing the exemption may have an effect on property rights for the small number of market participants who established tagged trades prior to 2010.

The removal of tagged trade more broadly would be a significant change, which would require analysis of replacement options.

Potential questions / further work

Need to consider the implications of removing tagged trade and any replacement options.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested:

- support the principle that all rules are applied equally to all water users, however
- do not support major changes to entitlement trade, without further consideration of alternative options.

3.5.3. Aither's current view

The removal of grandfathered entitlement trades is a policy decision for governments to make. It would have an impact on those holders of grandfathered entitlement tags but would have benefit for other market participants that seek to move water between valleys and could also help prevent third party environmental and hydrological impacts.

The pros and cons of removing tags altogether would need further consideration, noting that no alternative has been proposed.

3.6. Alternative and more dynamic mechanisms to manage inter-valley trades

3.6.1. ACCC's proposal

The ACCC has identified the option: '*Alternative and more dynamic mechanisms to manage inter-valley trades.*'

The ACCC's rationale for this recommendation appears to be to respond to criticism of the current IVT processes around the Basin – relevantly from a NSW perspective including the Murrumbidgee IVT and access to trade opportunities across the Barmah Choke.

3.6.2. Key considerations

Potential impacts

Changes to IVT rules are complex and time consuming. They could have system-wide impacts, including on the environment, water availability, trade opportunities, capacity constraints and third parties and need to be well considered.

Separately however, amending trade processing rules could improve the equity of access to trade opportunities.

Potential questions / further work

This option raises the following questions and potential for further work:

- Opportunity to improve transparency, information and understanding on how IVTs work and relationship with trade.
- At a higher level, are there other mechanisms that could be used instead of IVTs to deliver the intended outcomes (i.e. the management of third-party impacts from trade).
- Address equity issues around sharing access to available trade opportunities (e.g. process for applying/approving trade through Murrumbidgee IVT and across the Barmah Choke).
- Consider if IVT rules and account limits are defined and set optimally for current/future operating environment.
- Potentially identify and consider alternatives to using IVTs to manage interstate trade in the southern connected Basin.
- Opportunity to better align 'paper trade' with deliverability (tension between river operations and facilitating trade).
- Potential opportunities to look at the impacts of large trades across the Barmah Choke, improving equity of access to resulting trade opportunities; and ensuring the integrity of the process. This is particularly relevant to environmental trades, as their non-commercial nature makes them hard to predict by the market but may also need to be considered consistently for other large trades.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested:

- support for improving the transparency and understanding around IVTs generally, and implementing process improvements for trade constraints to address equity concerns,
- there are cost implications to improving trade processes (i.e. what is the market willing to pay for trade in order to fund improved systems?) and
- the introduction of alternative mechanisms to IVTs is not supported at this time – noting that improvements to current arrangements are important for equity and improved market confidence.

3.6.3. Aither's current view

In principle, Aither supports improvements to current IVT arrangements and trade processing mechanisms, but it is not clear that there is a case for major change away from using IVT limits to manage the third-party impacts of transferring water between valleys. Any shift in IVT rules requires significant assessment and consideration. The ACCC and Basin Governments could consider whether there is a role for formalised periodic reviews of all IVT rules or processes to ensure that they remain optimal.

3.7. Changing all allocation trade to tagged allocation trade

3.7.1. ACCC's proposal

The ACCC has identified the option: '*Changing all allocation trade to tagged allocation trade.*'

Tagged allocation trade is defined as: '*water that is allocated in one location (that is, catchment or trading zone) can be physically extracted (used) in another, as a result of a 'tag' placed on the water user's account in the state water register. Water only moves between valley accounts when it is being delivered and remains in the origin-valley accounts at the time of trade and for carryover.*'

The ACCC's rationale for this recommendation appears to be to improve IVT limits and more directly govern on-river delivery capacity.

3.7.2. Key considerations

Further definition of this option is required.

Potential impacts

- It could mean a major change, including consideration of the impacts on IVT accounts, as means for managing interstate trade.
- It could have impacts on the value of entitlements across the southern MDB and the flexibility of the movement of water between valley accounts. It could also create uncertainty for users about the deliverability of water in their different accounts if they could only guarantee access to water in another valley account at the time of delivery.

Potential questions / further work

This option raises the following questions and potential for further work:

- Requires further explanation of how this might work in NSW or on an interstate basis.
- Costs and benefits need to be assessed.
- Implications for entitlement holders and water users need to be considered.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- the option is not supported in its current form as it introduces significantly more complex trade and accounting arrangements,
- it requires further detail and explanation, and
- it is unclear what the problem is that this option would address.

3.7.3. Aither's current view

Further detail on any proposed changes is required, including the problem it seeks to address and the specific nature and operation of the proposed solution.

3.8. Improving consistency across Basin States' accounting and metering requirements

3.8.1. ACCC's proposal

The ACCC has identified the option: '*Improving consistency across Basin States' accounting and metering requirements.*'

The ACCC's rationale for this recommendation appears to be to consider the market impacts of inadequate or inconsistent metering across the Basin.

3.8.2. Key considerations

Potential impact

Noting the numerous state and Commonwealth reviews into metering and compliance in NSW and the Basin over the past 2 – 3 years, clearly improved metering and accounting can be beneficial to market confidence and integrity. Likewise, robust metering and telemetry would assist in the management of delivery capacity constraints and operationalise shortfall management arrangements. Against this however is the question of potential costs for water users.

Potential questions / further work

This option raises the following questions and potential for further work:

- Are there specific NSW accounting or metering issues that NSW has not yet addressed?
- Opportunity to tighten requirements in a consistent manner across the southern connected Basin, such as moving to daily or weekly uploads and no tolerance for 'going into the red' (i.e. ending the practice of going into credit and 'truing-up' by the end of the water year).

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that NSW:

- has undertaken substantial reforms over the past two years – which it considers to be Basin-leading - in metering, compliance and enforcement. The new non-urban metering rules will ensure that more than 95 per cent of licenced non-urban water infrastructure capacity has an accurate, auditable and tamper-proof meter, and
- is not aware of water accounting problems that need to be addressed.

3.8.3. Aither's current view

Aither supports consistent market rules across jurisdictions (noting the distinction in this case between 'market rules' such as metering requirements, and 'market integrity rules' – which are the subject of theme 1 of this report), noting that NSW has invested significantly in metering and has an on-going implementation program. Aither also supports effective Basin-wide accounting, but further detail is required on what problems need solutions. Based on our engagement with market participants over many years, there is a strong view that each state in the southern connected system should have consistent policies around metering, the frequency of usage uploads, and zero tolerance for accounts that do not have a positive allocation balance.

4. Changes to market governance

Summary of issues and options raised in the Interim Report

The ACCC characterises governance as relating to who sets the rules and oversees the market, and the processes for making these rules. In its view, good governance would result in consistency across the Basin and promote open and fair trading. The ACCC considers that improved governance will help to effectively resolve many of the issues identified throughout the inquiry, as well as strengthening the system so fewer problems emerge in the future.

Issues

In summary, the ACCC has raised the following issues:

1. Critical of current governance arrangements across the Basin; pointing to fragmentation, overlap, not meeting standards, conflicts, and ineffective decision-making frameworks.
2. Points to ad hoc solutions, staggered implementation (e.g. on trade reporting reforms), and failure to address issues in an integrated way.
3. Governance issues are the reason for lack of progress in market reform, form a major reason for other issues raised in the Interim Report, prevent issues from being addressed in an effective and timely way, and are a cause of distrust amongst irrigators.

Options

The ACCC has identified the following five options to address these issues, which are reviewed in detail further below:

1. Establish clear, independent decision-making structures.
2. Separate market governance roles from broader water management governance.
3. Consolidate or harmonise fragmented roles.
4. Reduce regulatory gaps by creating and assigning new roles or functions.
5. Addressing conflicting roles.

Summary of Aither's review

Review of issues raised by the ACCC

One of the key issues arising from this report for the NSW Government is the question of future water market governance and regulation frameworks in this theme – noting that is also arises in the first theme of ‘Conduct of market participants’ and is relevant to the themes of ‘Improving trade processes and market transparency’ and ‘Market architecture.’

The issues described are material, but in addition, the third option that the ACCC identified in the context of market conduct – establishing an independent market-focused government regulator – provides an important potential solution.

Review of options identified by the ACCC

Aither has analysed each of the five market governance options proposed by the ACCC and in summary:

- Aither supports the aims and principles reflected in the options, but the lack of detail as to the actual models or arrangements makes it difficult to assess them (and for the NSW Government to form positions). For example:
 - having clear and independent decision-making structures is an unambiguously useful aim, but no specifics on alternative structures are suggested, or specifics regarding current structures, and
 - consolidating or harmonising fragmented roles is also a useful aim, but the options need to recognise state-based responsibilities, and current and prospective institutional roles and responsibilities.
- In our view, resolving the governance issues and roles and responsibilities for oversight of the market is one of the critical first steps in improving confidence in the market. Practical changes to existing arrangements could be made by individual states but resolution of the potential for Basin wide regulatory arrangements will be critical in determining the broader roadmap for reform. In our view, there is merit in an independent Basin-wide (perhaps national) water market regulator, that recognises the authority and responsibility of NSW (and the other states) to operate markets, but has its own separate authority and responsibility for market oversight – i.e. regulation of intermediaries and the development and enforcement of market integrity rules.
- The success of such a regulator will rely on an appropriate and enforceable regulatory regime, i.e. clear market rules that have an enforceable evidence base to ensure compliance. Furthermore, a market regulator will require an appropriate skill base and resourcing to ensure that the market can actually be successfully regulated in practical terms.
- The need to address conflicting roles appears to mainly point to IIOs (relevant to NSW) and the MDBA, but there are no specifics about how conflicts within the IIOs might be addressed (and noting the Commonwealth has announced it will move to separate some MDBA functions). Feedback from NSW indicates that there is good reason to review potential conflicts within IIOs.

Detailed review of options – changes to market governance

4.1. Establish clear, independent decision-making structures

4.1.1. ACCC's proposal

The ACCC has identified the option: '*Establish clear, independent decision-making structures.*'

The ACCC's rationale for this recommendation appears to be to address '*ad hoc decision making while enabling the timely resolution of emerging issues or problems.*' Furthermore, '*a comprehensive, forward-looking and coordinated approach is needed to avoid piecemeal, reactive changes and achieve effective reforms.*'

4.1.2. Key considerations

Potential impacts

Could have positive impacts on the operation of the market if enhanced decision-making leads to better outcomes (e.g. better decisions in more timely fashion, which provide outcomes consistent with overall market and water management objectives).

Potential questions / further work

This option raises the following questions and potential for further work:

- What are the details of the proposed structures?
- What is the proposed oversight body to drive reforms? Is this separate from the proposed regulator?
- What are the future roles for MinCo and the Basin Officials Committee (BOC) as well as other inter-jurisdictional working groups related to markets and other matters (e.g. capacity sharing)?
- What is proposed for improved inter-jurisdictional collaboration and decision-making?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- all five potential governance options require further consideration,
- improved decision-making structures is supported in principle, but it is difficult to provide a further position given lack of detail on the proposed structure,
- all states would want to retain sovereignty,
- senior level multi-jurisdictional decision-making could be more transparent and robust,
- the current unanimous agreement requirement for intergovernmental decisions can impede outcomes,
- the current process has no ability to call on independent adjudication / decision making, and
- the ACCC position that much recent decision-making has been reactionary is a result of addressing and managing unprecedented recent conditions of extreme drought and water shortages.

4.1.3. Aither's current view

In principle, Aither supports the intent of the proposal. However further detail on proposed reforms to roles and responsibilities and institutional arrangements is required.

4.2. Separate market governance roles from broader water management governance

4.2.1. ACCC's proposal

The ACCC has identified the option: '*Separate market governance roles from broader water management governance.*'

The ACCC's rationale for this recommendation appears to be to '*establish clear processes for decision making by independent institutions established with a clear mandate to oversee trade and water management.*'

4.2.2. Key considerations

Potential impacts

Separating water market governance from broader water management governance should enable a market regulator to operate independently of policy-making agencies.

Further detail on proposed changes is required to assess the potential impacts.

Potential questions / further work

This option raises the following questions and potential for further work:

- As for section 4.1.2 (above).
- Does the ACCC recommend that an independent water market regulator be separated from a Basin level water management regulator, or just separate from state government departments in their roles as resource access regulators and market operators?
- Merit in doing further work on options for improving governance, but this should be based on how to better govern or regulate water management including water market outcomes, at the Basin level.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- all five potential governance options require further consideration,
- again, improved governance is supported in principle, but difficult to provide further positions given lack of detail on the proposed structure,
- water markets need to be considered together with water resource management unless the respective roles were very limited in scope and not reliant on a holistic approach, and
- the market governance role could consider improvements such as a common administrative assessment review process (that applied across all jurisdictions) with respect to amending, enforcing and reporting on the efficacy of water market rules.

4.2.3. Aither's current view

In principle, Aither supports more effective inter-jurisdictional governance and institutional arrangements that address the problems outlined by the ACCC. Further detail of specific models is required.

4.3. Consolidate or harmonise fragmented roles

4.3.1. ACCC's proposal

The ACCC has identified the option: '*Consolidate or harmonise fragmented roles.*'

The ACCC's rationale for this recommendation appears to be to address '*inconsistent governance frameworks, and difficulties for stakeholders in understanding and effectively engaging with governing institutions ... [which] also leads to difficulties resolving problems and harmonising systems due to the time, resources and coordination necessary to effectively collaborate, leading to bureaucratic inertia.*'

4.3.2. Key considerations

Potential impacts

The consolidation or harmonisation of fragmented roles should contribute to improved market operation – through better decision-making and co-ordination and alignment of government services.

Some of the problems identified might be addressed by better collaboration and intergovernmental processes rather than major changes to roles, or through improved communication and information.

Potential questions / further work

This option raises the following questions and potential for further work:

- As for section 4.1.2 (above).
- Also, are there specific roles that should be consolidated or harmonised?

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- all five potential governance options require further consideration,
- again, improved governance supported in principle, but difficult to provide further position given lack of detail on the proposed structure, and
- there are good opportunities or scope for having more common systems and processing, platforms etc, which wouldn't impact state sovereignty.

4.3.3. Aither's current view

In principle, Aither supports more effective inter-jurisdictional governance and institutional arrangements that address the problems outlined by the ACCC. Further detail of specific models is required.

4.4. Reduce regulatory gaps by creating and assigning new roles or functions

4.4.1. ACCC's proposal

The ACCC has identified the option: '*Reduce regulatory gaps by creating and assigning new roles or functions.*'

The ACCC's rationale for this recommendation appears to be to address '*the opportunity for misconduct to occur, or mean that third party impacts (externalities) are not being adequately addressed.*'

4.4.2. Key considerations

Potential impacts

The reduction of regulatory gaps should contribute to improved market operation – through better decision-making and co-ordination and alignment of government services. This option could impact governments and regulatory agencies in (re-)designing and implementing changes, and impact those facing any new regulatory obligations (e.g. IIOs).

Potential questions / further work

This option raises the following questions and potential for further work:

- As for section 4.1.2 (above).
- Consider options to address the specific underlying problems – in this case this appears to relate to intermediaries, market manipulation, and IIO roles and practices.

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- all five potential governance options require further consideration,
- again, improved governance supported in principle, but difficult to provide further position given lack of detail on the proposed structure,
- NSW has undertaken significant institutional reform over the past four years, including the establishment of NRAR, and
- the relationship with and regulation of IIOs in NSW requires further consideration, as more transparency of markets within IIOs is needed to improve market confidence (noting that these are some of the biggest trade markets).

4.4.3. Aither's current view

In principle, Aither supports the reduction of regulatory gaps described in this option on the basis of improving the effectiveness of government management and regulation of the water market. Aither also notes that the issues of visibility and transparency within IIOs appear to warrant further review.

4.5. Address conflicting roles

4.5.1. ACCC's proposal

The ACCC has identified the option: *Address conflicting roles*.

The ACCC's rationale for this recommendation appears to be to address '*some existing government agencies not fulfilling certain roles or functions as well as they could*'.

4.5.2. Key considerations

Potential impacts

Addressing conflicts could improve market confidence and support the integrity of market institutions. The recent changes announced to the MDBA, to separate out policy and compliance roles appear to be significant, with potential implications for how NSW interacts with and supports the MDBA in its separated roles.

Changes within IIOs may impact IIO businesses but could benefit irrigator members or competing brokers and exchanges.

Potential questions / further work

As for section 4.1.2 (above).

Additional insights from NSW Government and WaterNSW subject-matter experts

Consultation with NSW Government and WaterNSW subject-matter experts suggested that:

- all five potential governance options require further consideration,
- more thought needs to be given about how to address the IIO issues,
- further detail is required on the implications for NSW of the separation of the MDBA,
- while the separation of the MDBA is a matter for the Commonwealth, there needs to be adequate consultation with states, and
- there are questions around whether there would be a national regulator, or just a Basin regulator/

4.5.3. Aither's current view

In principle, Aither supports addressing conflicting roles described in this option on the basis of providing enhanced operation of the water market. Further details on proposed inter-jurisdictional institutional arrangements are required.

Aither notes that the issues of conflicts within IIOs appear to warrant further review, as IIOs potentially have multiple roles, including:

- trade processing and approvals,
- operating as brokers and/or exchanges,
- market participant as a buyer or seller (including efficiency dividends from conveyance licences),
- supplier of water, through distribution efficiency announcements.

Document History

Revision:

Revision no.	3
Author/s	Ryan Gormly, Wilfred Finn, Chris Olszak
Checked	Wilfred Finn, Chris Olszak
Approved	Chris Olszak

Distribution:

Issue date	3 November 2020
Issued to	The NSW Department of Planning, Industry and Environment
Description	FINAL

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Citation:

Aither 2020, Review of the Interim Report of the ACCC Water Market Inquiry , Aither Pty Ltd.

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