APGA Submission to the AER

Pathway to 2022 Rate of Return Instrument

17/01/2020

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1. Introduction

The Australian Pipelines and Gas Association (APGA) welcomes the opportunity to comment on the Australian Energy Regulator's (AER) November 2019 consultation paper 'Pathway to the 2022 Rate of return instrument' on the 2018 rate of return instrument process and the December 2019 update to the rate of return.

APGA is the peak body representing Australasia's pipeline infrastructure, with a focus on gas transmission, but also including transportation of other products. Our members include owners, operators, constructors, advisers, engineering companies and suppliers of pipeline products and services. APGA's members build, own and operate the gas transmission infrastructure connecting the disparate gas supply basins and demand centres of Australia, offering a wide range of services to gas producers, retailers and users. The replacement value of Australia's gas transmission infrastructure is estimated to be $50 billion.

A stable, predictable regulatory framework is vital to maintaining the attractiveness of the Australian energy sector as a destination for investment. It is in the context of this recent history that we make this submission in respect of the current process, which we hope can contribute to a future improved investment environment.

We have addressed the questions asked by the AER in its November discussion paper, but we note that there is a lot more in the Brattle paper which accompanies the discussion paper than is reflected in the discussion paper itself. The AER appears to have concluded that much of this additional commentary reflects concerns about outcomes, rather than about process, and has thus chosen not to address it in the discussion paper. However, reading through the comments, and reflecting back on the aspects of the instrument to which stakeholders refer, it appears to us that many of these concerns raised by stakeholders are concerns about process. In particular, they are concerns about the process of reasoning employed by the AER in coming to various conclusions within the instrument.

In Section 2 of this response (and in more detail in an appendix) we outline areas of concern we can see with the AER's process of reasoning in the instrument. We believe this is an important issue, which should be discussed with stakeholders, to effect improvements in 2022. We have, accordingly, provided some suggestions which may assist in improving the process of reasoning whereby the AER makes its decisions, with a view to this being part of the discussion leading towards 2022. We note in doing so that this is not by way of criticism of the AER per se; the rate of return instrument is a highly complex piece of work involving many decisions and judgements, and it would be a surprise if none of these decisions and judgements were capable of improvement.

Section 3 of the response answers a number of the AER's specific questions from the November paper, and Section 4 provides the feedback requested on the December rate of return update.

In section 5, we suggest a number of topics for additional working papers.

An appendix contains our detailed consideration of issues with the aspects of the process of reasoning in the 2018 documentation, which is summarised in Table 1 in Section 2.

2. AER reasoning process

Reading the November discussion paper alongside the Brattle summary of its discussions with stakeholders reveals a number of issues which were raised in the Brattle report, but not in the AER's November Paper. These include:

- Concerns raised by some stakeholders in respect of the degree to which the review was an incremental review (pp6-7).
- Concerns around different evidence being subjected to different processes; for example, the separate process around debt, after the expert sessions (p8).
- The process focussed too much on how practitioners estimate things like the market risk premium, rather than what the right answer is (p8); although other stakeholders suggested the final result still surprised the market (p5).
- Some stakeholders felt that the AER placed different standards on evidence from some stakeholders vs others, and whether the evidence pointed to a lower or a higher allowed rate of return (p10).
- Stakeholders expressed concern at the lack of explanation of reasoning in parts of the AER's process and a feeling of inevitability in the results; especially in the context of the AER's outcomes failing most of its own cross-checks, but this not leading to any change in results (p11). This reduced confidence in the outcomes of the process. Stakeholders also commented on a lack of balance in the treatment of evidence, with some relatively trivial issues assessed in great detail whilst more important issues received more cursory treatment (p12).
- An approach to estimating the DGM (suggested by one expert in the concurrent sessions and later fleshed out in response to a query from the Board) was dismissed on the basis of problems which might exist, but which were not assessed to understand if they did exist (p12).
- The AER responded to concerns expressed by stakeholders that it was changing the way it used the theory of the Black CAPM from that in 2013 by suggesting that, if it only made changes when theory changed, it would seldom change anything (p12).
- The AER didn't always indicate which issues were important to stakeholders when liaising with the Independent Panel, with the result that the Panel appears to have missed many issues key to stakeholders as it would have been extremely onerous to have to look through all of the stakeholder submissions to uncover their key points (p12).
- Some stakeholders suggested that it appeared that the CCP had drafted some parts of the final instrument, and there were concerns as to how much interaction the CCP appeared to have had with AER staff whilst their decision was being drafted (p15).
- Some stakeholders were concerned that some experts were focussing on questioning the prevailing finance theory paradigm rather than focussing on the more practical task of determining an appropriate rate of return; and others were concerned at the lack of familiarity some experts had with the regulatory process (p17).
- Some stakeholders were concerned that the expert sessions spent too much time on old arguments from 2013, rather than moving forward (p17).
- Some stakeholders were critical of the clarity of the AER's writing, and suggested that the AER would do better to make the instrument self-contained – focussing on what evidence had led the AER to make a particular conclusion rather than focussing on responding to every submission made on every issue. The AER could also highlight issues which may arise

in future, and explain how the AER proposes to deal with them; like the drop in the number of companies with data available for the estimation of asset betas (p22).

- A stakeholder suggested there may be merit in having the Productivity Commission examine the AER's process and treatment of evidence to avoid the bias of entrenched models that can only result in incremental changes to allowed returns (p22).

The question is whether there is any consistent theme arising from these comments. The AER appears to have drawn the conclusion in its November paper that all of these comments are associated with outcomes. We draw a different conclusion; we think many of the comments above point to a concern amongst stakeholders about the process of reasoning used by the AER to derive at least some aspects of its rate of return instrument.

We believe there are three distinct aspects to process when one is talking about an overall endeavour which aims to collect evidence and deliver an opinion or finding:

1. Determination of the activities to be carried out and the assignment of tasks to organisations and individuals identified as participants in the process.

2. Performance of the tasks, including the collection of evidence and preparation of the opinion or finding based on that evidence.

3. Establishing the process of reasoning whereby the opinion or finding is to be obtained from the evidence.

This third aspect of process – establishing the process of reasoning – is not the same as obtaining an outcome – a particular opinion or finding – by applying the process of reasoning to the evidence which has been collected. In the context of the rate of return review, it is not part of what Brattle refers to as "content of the final instrument".

There were, we believe, problems with the process of reasoning which produced the 2018 rate of return instrument which stand independently of the content of the instrument, and to which consideration should be given before the 2022 instrument is prepared. We group the problems we have found with the AER's process of reasoning into three categories:

1. **Unbalanced consideration:** Where evidence was presented which led to a different conclusion than something the AER had previously endorsed; it was often treated differently to evidence which supported the AER's point of view. This makes it very difficult for anything new to be properly considered, and may mean that we end up perpetuating sub-optimal outcomes just because the barrier to change has been set too high.
2. **Thin reasoning:** the reasoning is just not robust, or where it is illogical: the reasoning is inadequate to support the outcome.
3. **Misunderstanding the issue:** where a source has been cited, or a view paraphrased, this has not been done accurately.

The various issues in respect of the process of reasoning are summarised in Table 1 (and further detail is provided in Appendix A).

Table 1: Issues with AER reasoning

Issue	Issue type	Relevant pages in instrument explanatory statement
Foundation model change	Thin reasoning	79-82
Rejection of Wright CAPM	Unbalanced consideration	85-6 and 232-5
Cross checks	Unbalanced consideration	102-21
Rejection of Earwacker evidence	Thin reasoning	118-21 and 228-9
Beta approach	Thin reasoning	142-94
Use of long time series for beta	Unbalanced consideration	164-6
Rising betas in data, falling beta allowance	Unbalanced consideration and thin reasoning	168
Stability of beta	Misunderstanding issue	172
Unregulated activity systematic risk	Thin reasoning	174
Changes in theory of Black CAPM	Thin reasoning	216-17
Use of Black CAPM	Unbalanced consideration	206
Drivers of low beta bias	Thin reasoning	211-13
Expected returns and bias	Thin reasoning	217-19
Rejection of survey evidence on MRP	Unbalanced consideration	237
Sample time series for dividend growth/GDP analysis	Unbalanced consideration	259
General consideration of dividend growth/GDP analysis	Unbalanced consideration	259-63
Use of geomean for historical MRP	Thin reasoning	245-6
BHM vs NERA MRP data	Unbalanced consideration	248-9
Constant market returns and DGM	Misunderstanding issue and unbalanced consideration	255-6
Conditioning variables and MRP	Unbalanced consideration	272-4
"Theory" of gamma	Thin reasoning	321-9
ATO data vs ABS data	Unbalanced consideration	335-8 and 363-5
Use of 50 firm data for distribution rate	Thin reasoning	343 and 337
Rounding policy for gamma	Thin reasoning and misunderstanding issue	377
Conclusions on financeability	Misunderstanding issue	392-404

In any complex decision-making process, there is bound to be some variability in the quality of the reasoning underpinning individual judgements that make up the overall decision. If there were a handful of isolated examples with limited impact, then this issue would hardly be worth pursuing further. However, we believe that the problems with the AER's process of reasoning are sufficiently pervasive to have provided stakeholders with reasonable grounds for expressing the lack of confidence in the 2018 Rate of Return Instrument.

The question is: what can be done about this? We believe it is worthwhile for the AER to devote resources to starting this conversation with stakeholders now, and with this in mind, we present a few ideas which may assist at least as a starting point to developing the right kind of mechanisms:

- Rather than focussing on explaining all of the evidence it has considered and why each piece is appropriate or not - with the actual evidence used by the AER to make its decision only emerging through the narrative - the AER could include, with the instrument, a brief

and transparent summary of what evidence and data it has used and how it used it to obtain its outcomes.

- To avoid stakeholders being concerned about different evidence being treated differently, the AER ought to commit to a set of clear evidentiary criteria, and expressly assess evidence against these criteria. This might include:[1]
    - Whether the evidence is supported by a majority of the literature, or whether it is a minority view.
    - Whether, in the case of empirical evidence, the evidence has accounted for potential statistical issues and has either quantified them so that they are clear, or taken measures to avoid them in keeping with best statistical practice. In this context, the AER should also commit itself to not reject said evidence on the basis of a list of issues which might exist, but rather to testing its own list of potential objections for actual impact. This was a key concern raised by stakeholders in the Brattle report
    - Giving greater weight to evidence which is capable of being falsified by data than evidence which is based on theory or conjecture.
- Where the AER makes use of cross checks in respect of the return on equity, it should pre-commit to a transparent framework which explains clearly to all stakeholders what success and failure of each cross check actually means, and how it would seek to change the outcome for the return on equity if the cross checks were breached. The AER does not use cross-checks in other parts of the rate of return instrument at present but, where it does, it should adopt the same standard.

[1] *We note that the AER already addresses stakeholder evidence via a series of tables, and gives reasons for acceptance or rejection. However, this is often not against a set of clear and transparent criteria, and as often as not involves the AER making judgements which are not transparent.*

3. Response to AER questions

In this section, we provide our responses to those questions asked by the AER in its November discussion paper to which we have a view to contribute.

Q8. How could the concurrent evidence sessions be adapted to improve discussion on topics?

We think the overall approach of having a set of pre-set questions, which the experts address, and having the sessions held in public (albeit with the size of the audience limited for logistical reasons) with only the AER Board permitted to ask questions worked well. We also do not think that the proposal suggested in the discussion paper of having the sessions held on camera, with only the transcript available, is appropriate. It is true that the transcript does provide a record of what was said. However, there is something to be said about having the workings of the AER Board being seen in operation by stakeholders in the manner that they were in 2018. Several of our members attended in 2018 and noted the greatly increased confidence engendered by seeing decision-making in action.

Improvements could be made, however, in the collation of questions. There were arguably too many in 2018, and some of them did not seem to contribute very much to the overall rate of return.

This could be discussed in the early stages of the process to 2022, but might involve stakeholder groups (potentially together) working on a long list of questions and the AER Board turning this into a short-list. We note that the publication of the reasons for omitting questions, or for the AER Board adding their own, could help stakeholders understand the evolution of the process. Alternatively, experts could be provided sufficient time to work on areas of agreement together and develop a list of questions which helps them explain to the Board where and why differences occur.

Q9. At what points in the process would the concurrent evidence sessions aid the most?

The timing used in 2018 was not appropriate as the AER released some of the expert material for discussion too close to the sessions or after these sessions. We recommend the AER releases all consultation material with sufficient time ahead of the concurrent sessions (say 3 months) so that all experts have sufficient time to consider and participate in the process. This should include material on inflation and how it will be used to deliver a real or nominal rate of return. There may also be scope for an additional session after the draft decision for experts to focus upon how their evidence has been interpreted by the AER, if this can be done in such a way that does not overlap with the role of the Independent Panel.

Q10. What could be done to better assist the concurrent evidence sessions to fulfil their role? Do the evidence sessions need to be extended to allow more discussion on certain topics, or should the number of rounds be increased?

The concurrent evidence sessions were a very useful innovation in 2018, and hold the potential to greatly simplify the process by which expert evidence is fed into the process. However, there are several ways in which they could be improved.

First, it is not clear how they were actually used by the AER. In some instances, agreement from experts was used by the AER as a basis for what it eventually did. In other cases, if an expert suggested something might be the case, the AER used this as a reason for action (see, for example, the use of long time series for beta in Table 1 above). Also, there were several cases where there was agreement by experts, but the AER concluded that experts might have felt differently if they had been given more time.

This reduced stakeholder confidence in the concurrent expert session process as it seemed the AER was using the sessions to cherry-pick evidence to support its case, rather than using the totality of evidence from experts. This was exacerbated by the AER:

- Making use of several experts on different topics, and not putting forward a particular expert on a particular topic when it was known by many stakeholders that that expert disagreed with the view previously put forward by the AER. This was noted in the expert sessions themselves, and the AER still did not seek the views of its own dissenting experts; something which reflected poorly on the transparency of the process.
- Commissioning reports from their own experts on essentially the same topics as addressed in the expert sessions. Whilst the AER has a right to consult its experts, doing so in this manner, immediately after the expert sessions had happened, appeared to stakeholders as though the AER was seeking a second bite at the cherry for its own experts.

The AER could greatly enhance confidence amongst stakeholders that it is making real use of the expert evidence. This could be done by explicitly giving the views coming from the concurrent expert sessions greater weight, and not simply treating them as another piece of evidence with similar weight as other stakeholder views.

The **second** issue associated with the expert sessions is that the experts are not really held to account for their views in any meaningful way. There is nothing preventing an expert from saying something in session which is different to what they have said in their published work and, in so doing, advocating a particular position rather than providing expert views. Moreover, it may be very hard for the AER Board to appreciate where this is happening given the highly technical nature of the issues being discussed. This may in fact have contributed to the AER giving less weight to expert evidence.

There may be some formal mechanism the AER Board could impose to prevent advocacy supplanting expert advice, such as asking experts to formally commit to following, for example, the Federal Court's guidelines for expert witnesses and then imposing some form of sanction where it is shown that they have not met these standards. Alternatively, it may be sufficient for the Board to require experts to indicate where the view they are expressing (in session or in their joint report) differs from a view expressed in their published work, and outline the reasons why. This could then be used by the Board as one input in assessing the evidence from that expert.

Q11. Do stakeholders consider the Joint Expert Report was useful to the process? How could it be improved?

The Joint Expert Report in 2018 was a good first step towards what such a document ought to look like, but it was only a first step, hamstrung somewhat by timing and planning issues. With a longer timeframe available now for a better-planned process, we ought to be able to do much better.

The most important change would be to inject a small amount of formalism into the process with the production of a majority and minority view on each question put to the experts. This was only partially fulfilled in 2018, where the report noted who agreed and who disagreed, and very brief reasons why.

The greater formalism should come in respect of reasons for holding a given view, which should be much more detailed and grounded in evidence and not simply consist of a series of dot points summarising a view. This is most particularly the case for the minority view. The authors of the minority view (the same standards should apply to the majority view) must clearly stipulate why they believe the majority view is incorrect, and what evidence they are relying upon which has been ignored by the majority view. Moreover, the authors of the expert report should be the experts themselves, rather than the convenor.

Where the issue in question has an empirical basis, a view cannot be based solely upon problems which might exist, but experts should rather show that the issue does exist (by undertaking relevant empirical analysis) and showing that it is sufficiently material. These are the same standards we suggest the AER should follow in the same context, and it is appropriate that experts should be bound by similarly robust requirements.

The standards are higher than they were in 2018. However, they are no higher than would be the case in an academic publication, with which all of the experts would be very familiar. Holding the experts to such high standards assists the AER greatly, as it provides a ready basis of reasoning with which it can transparently engage, and avoids the issue of a confusion of views amongst experts, giving the AER little opportunity for a sound basis for which expert to follow.

Q12. Are there any adjustments that could be made to the Independent Panel that would assist it in undertaking its role?

We believe the AER's stance towards the Panel during the 2018 review and in the November 2019 discussion paper represents a missed opportunity for the AER to provide a credible promise to all stakeholders in respect of its internal accountability; the standards to which it holds itself. We recognise that the AER does not want a return to the Limited Merits Review regime, but the role of the Panel in legislation is fundamentally different to this. Most particularly, the Panel has no power to make a decision at all, and the AER has no obligation to implement any of its recommendations.

We think the Panel should be allowed, and indeed required to put major focus on outcomes, and not on processes; the Panel included some highly credentialed finance experts and having them largely ignore outcomes and focus on process is a little like asking Roger Federer to be the ball boy at the Australian Open. We also think the Panel should:

- Be required to have a goal of results that best meet the requirements of the NGO/NEO, rather than the far more modest goal of assessing whether the instrument could meet the NGO/NEO.
- Be required to provide a summary table or similar which summarises the changes the AER ought to make so that stakeholders can clearly see these changes.

- Have an ability to question experts in some way, most particularly if the AER has disagreed with experts in forming its view in its draft decision.

The AER, in assessing the Independent Panel's report and forming its final decision, should commit to all stakeholders to a high accountability standard whereby, if they disagree with a particular change proposed by the Panel, they will clearly explain to stakeholders why this is the case (beyond some vague reference to judgement), including what data they have used, or how they have interpreted data differently to the Panel. This is essentially the same requirement suggested for evidence from the concurrent expert sessions and, as is the case there, the higher standard will greatly increase confidence in the final decision and the support it has from the Panel.

In respect of contact with the Panel, or the Panel being involved with, say, the concurrent expert sessions, we do not really understand the AER's concerns. After all, if a particular stakeholder did hold evidence back from the AER (which appears to be a concern of the AER) and present it only to the Panel, the AER could, in its final decision, explicitly state that it had ignored that evidence because the stakeholder in question had acted in this way. Moreover, if it stated clearly at the outset of the process that this is how it would act, it is difficult to see how stakeholders would benefit from this kind of gaming of the process.

However, as a compromise solution which might meet the concerns of stakeholders that the Panel was not seeing which issues were most important to stakeholders, as well as the concerns of the AER about the Panel seeing new evidence not part of the Draft Decision, each stakeholder could be asked to provide a summary table or similar which highlights the, say, ten issues they consider most crucial. This could accompany submissions, or be presented to the AER as a stand-alone document prior to the Draft Decision. The AER could, in turn, commit to provide these documents to the Independent Panel, making clear their purpose, and ask the Panel to consider each carefully, so that they can be efficiently guided to the relevant parts of stakeholder submissions.

4. December rate of return update

In this section, we provide a response to the AER's December 2019 update to the rate of return instrument's inputs, and provide some suggestions for potential working paper topics the AER may like to consider between now and 2022.

Overall, we think it is good practice to update the inputs and evidence which informs the rate of return instrument, as this allows stakeholders to develop a picture of emerging trends heading into the 2022 process. However, we believe that the AER could improve the document in several ways:

- The AER has updated input data, but not provided much context around the updates. At a minimum, the AER ought to explain the weight particular inputs had in 2018 so readers can understand whether a change is likely to be material. However, the updates would be improved still further if, as trends in the data emerge, the AER provided some indication as to how its thinking was evolving with the data. This may form part of the working paper process.

- The AER used several cross-checks in its 2018 instrument, but only updated one of them. It is not clear why the other cross-checks were omitted. Producing better cross checks, and establishing better ways to use them is also a worthwhile working paper topic.

- Although the AER did not use financeability information in 2018, its own calculations showed that almost a third of the benchmark efficient entities were not financeable. This is a concern, and not one which can be addressed, as the AER suggests, by businesses changing gearing by paying lower dividends than the AER suggests are efficient, or injecting more equity than the AER suggests is efficient. If this was simply a factor of timing, this would be less of a concern, and updating the financeability information would assist in ascertaining whether this is true.

- The AER aims at delivering a real rate of return. It would therefore be useful if it showed what the real rate of return is with each update, rather than just the nominal rate of return. There is no market data on current expected real (or indeed nominal – the reason why this aspect of the instrument is so contentious) return on equity, but there are several indexed corporate bonds available in the Australian marketplace. Providing yield to maturity information on these could provide useful context for stakeholders in understanding whether the instrument continues to provide suitable returns to investors.

5. Additional Working Paper Topics

We turn now to potential working paper topics which may prove useful ahead of the 2022 process. Our non-exhaustive list includes:

- **Enhancing confidence:** as noted above, a key issue emerging from the Brattle report appears to be concerns about the AER's process of logic and reasoning. Left unaddressed, this may lead to a lower level of confidence amongst stakeholders as we head towards 2022. This is best addressed with stakeholders so that structural measures to improve confidence are owned by all and not seen to be imposed by the AER. However, the AER is hardly alone in needing to exercise subjective judgement amongst competing instruments in a manner which inculcates confidence in results. Although outside the technical finance literature with which the AER is most familiar, there is a wide literature on best practice in this regard; for example, in the field of institutional economics. A working paper looking at this may assist in guiding engagement with stakeholders.

- **Changes in the literature:** The 2018 instrument was, naturally, based on evidence available at the time. If some new theoretical construct suggested that, say, the CAPM was weak in the particular context likely to be faced post 2022, then this should obviously inform the AER. Likewise, if the AER rejected an idea put forward by a stakeholder in 2018 due to a lack of empirical evidence, and such evidence has subsequently emerged, the AER will want to reconsider the issue. Although it may take more than one working paper, and the AER could lessen its literature search burden by involving stakeholders more widely, it seems obvious that checking new evidence ought to be part of the working paper programme.

- **Changes in data availability:** In 2018, there were only three live firms for the estimation of beta, but there was one more firm which had only recently ceased trading. By 2022 some of the historical data will be more than a decade out of date, and all of it will be more than five-years old. It would be useful for the AER to discuss what it proposes to do in this situation. To the extent that it does rely upon international information, it may prove useful to look across the regulatory space and develop consistent approaches to such information rather than acting in an ad-hoc fashion. For example, the AER currently makes significant use of international information in productivity benchmarking, but much less so in beta estimation, where arguably similar issues exist in terms of data availability. Although beta is not the only area where data availability may be an issue, it may serve as a useful catalyst for a wider investigation of consistent approaches.

- **Cross checks:** The AER presented several cross-checks in 2018, but it appears that it really only relied on one. Moreover, this was the cross-check on which it placed least weight in 2013. Perhaps most importantly, it is very unclear how the cross checks were used, what constitutes failure, and what the consequences of failure would be for a rate of return derived from a particular set of decisions. All of this points to a need to consider cross-checks more robustly. This involves not only considering what cross-checks to use, but also how they are to be used. A working paper on this topic would assist in commencing the process of stakeholder consultation on this topic, although we note that the process by which the AER and stakeholders agree a-priori (that is, before the AER has made its decision on what the rate of return ought to be) how cross checks will be used and the

consequences of failure will be critical to improve confidence in this area.[2] This requires more than just a working paper.

- **Low interest rates:** Interest rates are, according to some authors, the lowest they have been in 5,000 years. Just as it was worthwhile in the wake of the GFC for the AER to consider whether times were somehow different from normal and whether or not it needed to act, it may well be worth the AER considering whether low interest rates represent a different regime for investors, requiring different tools.

- **Financeability:** In the 2018 instrument, the AER published some financeability results. Although it did not rely upon them, it was disconcerting to our members to note that the benchmark efficient entity failed a financeability check in around a third of the cases the AER examined. This, however, was at a point in time, and it would obviously be useful to see whether this improves through time and, if it does, may serve to alleviate concerns on the part of investors. We think the financeability of the AER's rate of return proposals should be assessed, and the approach to assessment should be discussed in a working paper.

[2] *One way to think about this is as a form of "regulatory Rawlsianism", whereby the AER thinks seriously about whether it would be equally happy to be a regulator, regulated business or consumer under the structures of decision-making that produce outcomes. In this context, if the cross-check process was structurally biased to produce high rates of return, the AER would be happier to be a regulated business than a consumer and therefore the cross-check process is inadequate. The notion is loosely based upon the "veil of ignorance" concept used by John Rawls in his seminal work on ethics; applied here to the "regulatory compact" rather than a broader social contract. This obviously has wider application to the AER's work and is not restricted just to cross checks on the rate of return.*

Appendix A: Additional analysis of AER reasoning process

In this appendix, we provide the detail behind the entries in Table 1, which captures issues with the AER's reasoning which may have reduced stakeholder confidence in the overall process. Our focus is not on whether a number was right or not, but rather on the process of reasoning which the AER employed.

The first (in respect of position in the Explanatory Statement) is the AER's response to the issue of changes or otherwise to the "Foundation Model" (see pp 79-82). In 2013, for the return on equity, the Black CAPM, Wright CAPM and DGM had clear concrete roles; but for these two models the answer would have been different. In 2018, neither model had any role at all. In the pages cited, the AER maintains that it has not changed its foundation model approach at all, because it has considered these models, just as it did in 2013. It maintains that the only change is that it has down-weighted the evidence. In Table 6 (pp82-3), the use of the Black CAPM is described thus:

> *Related to the overall return on equity. However, at this time, we have diminished confidence in the robustness of the Black CAPM and are therefore not persuaded to adjust the Sharp-Lintner CAPM estimate for the theory of the Black CAPM.*

The use of the DGM is described thus:

> *Can inform the MRP. However, at this time we have diminished confidence in the robustness of DGMs and are therefore not persuaded to select an MRP towards the top of the observed empirical estimates of historical excess returns.*

The use of the Wright CAPM is described thus:

> *We have diminished confidence in the robustness of the Wright approach leading us to place no reliance on it.*

And the use of the Fama-French Model is described thus:

> *No role.*

Despite the words the AER has used, in actual fact, the use to which it has put all four models is the same; zero. When it suggests that it has "down-weighted" some of the evidence, what it appears to mean is that it has down-weighted it from having a positive effect to having no effect. Whether it was reasonable, given the evidence it considered, to move from making use of some evidence to making no use of said evidence is not the issue here; the issue is rather one of asserting no change from its 2013 "foundation model" approach.

Based upon the logic the AER employs in describing what it has done, and refuting the claim that it had departed from its 2013 foundation model approach, the foundation model is a meaningless concept; all it says is that the AER will consider evidence put before it by stakeholders, and then it will make a decision, giving each piece of evidence a weight between zero and 100 percent. This is not a model, this is the AER's normal role. The effort the AER put into refuting the accusation that it had departed significantly from its 2013 guideline, and thus had conducted an "incremental review" put a serious dent in the confidence with which stakeholders view the

outcomes and will mean, come 2022, stakeholders will view with suspicion any claim of an "incremental review" and will instead furnish detailed evidence on all issues early in the process before it becomes too late to do so.

The second is the arguments around the use or otherwise of the Wright CAPM (ES pp85-6 and 232-5). The AER has reduced its reliance on this model to zero, stating:

> *Having reviewed the Wright approach in this process, we do not place any reliance on it as the model has no theoretical basis in Australia and is not an appropriate tool for regulatory use, nor is it used by market practitioners.*
>
> *The Wright approach is in effect, a model that assumes a stable total market return and perfect negative correlation between the risk-free rate and the MRP.*

This is true, for the most part (the model does not assume completely stable total market returns, but rather uses the long run average as a proxy for expectations, which can change – albeit slightly – year to year). However, the same could be said of the evidence the AER does rely solely upon; the historical market risk premium. The AER's experts in the concurrent expert sessions (see Evidence session 2 pp.62-73 and the joint expert report p.61) made this point, noting that neither a fixed MRP (AER approach) nor a fixed total market return (Wright model) was correct, but that the truth lay somewhere between the two.[3]

However, nowhere in the Explanatory Statement does the AER subject historical MRP estimates to the same analysis to which the Wright CAPM is put. This is an issue of a failure of the process of reasoning; we do not have an issue with the AER rigorously assessing a particular methodology put to it, and rejecting it. However, the methodologies which it accepts, particularly when they are subject to essentially the same underlying criticisms, must be put under the same level of scrutiny. To do otherwise undermines confidence in the results.

The third issue is the AER's use of cross checks (ES pp.102-21). The AER's own evidence shows that its equity risk premium (its preferred benchmark) sits either at the bottom of the range from other cross checks or below it; the only evidence for which this is not the case is the AER's comparison between DRP and ERP, which it dismissed in 2013 as a reasonable cross check.[4] The AER does not help its case by stating (ES p.107):

> *Network businesses and investors submitted that these cross-checks indicated that our range and point estimate determined at step 3 were unreasonably low. In contrast, some consumer submissions argued the opposite, that they were unreasonably high.*

However, reading the submissions summarised immediately above this quote, it is clear that, whilst the network businesses were focussing on the cross checks that the AER actually used, the

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[3] *They differed in how close they thought the "true answer" might lie to one or other of the end points, but not in respect of the basic proposition. The AER arguably over-emphasised the issue of inverse relationships between risk-free rates and market returns, suggesting (e.g. p230) and the degree to which submissions asked the AER to consider this as an issue, and this appears to be designed to ensure that the Wright CAPM cannot be used in any form.*

[4] *See AER, Rate of Return Guideline: Explanatory Statement: Appendices, December 2013, page 95. AER, Final decision: Access arrangement final decision: APA GasNet Australia (Operations) Pty Ltd 2013-17, Part 3, March2013, page 48. The AER deals with this in ES p 112, but don't explain why a metric which was rejected in 2013 played such a major role in 2018.*

consumer groups were suggesting that the return was too high, based upon an entirely different set of checks, which the AER did not consider at all.

More broadly, it is difficult to see how, reading through pages 102-21, the AER could determine that its allowed rate of return was reasonable. There is nothing in the discussion which indicates what level of any of the cross checks would have led the AER to conclude unreasonableness. This is a key concern; stakeholders have no understanding of what success or failure of the results which come from the AER's input-based analysis looks like. Instead, the overwhelming impression is that it would be impossible for the AER to conclude unreasonableness of any of its results as most of the discussion focuses on why, despite the AER answer being at or below the bottom end of the relevant range, it is still reasonable and why it is in fact the cross-check which is problematic.

This is illustrated perhaps most starkly in the AERs treatment of the Earwacker report submitted by the ENA (ES pp.118-21; see also pp.228-9). This showed that the equity risk premium on offer by the AER was well below almost every other international regulator, and that the AER used a lower market risk premium, despite Australia actually having a higher market risk premium in the historical data upon which the AER purports to rely. The Earwacker report was dismissed by the AER on the grounds of (ES p.119):

> *Differences in regulatory framework, the domestic economy, geography, business cycles and other factors are likely to drive differences in estimates;*
>
> *Different methodology (specific examples follow).*

In respect of the first point, it may well be the case that there is a diversity of risk factors, business cycles and so on, but it would still be incumbent upon the AER to show why the particular situation of Australia in respect of these factors necessarily leads to such a low premium. In respect of the second, whilst it is true that different regulators use different methodologies, it is also true that said regulators had open to them the choice that the AER took, and none of them took it. Whether the AER's final answer is correct or not, its reasoning process should have shown a great deal more engagement with the evidence than the observation (ES p.121) that international regulators could provide relevant methodologies and datasets, but that the case is not strong enough for change. Again, the issue is one of a process of reasoning; it is unclear what the barrier is for change in respect of international evidence.

The fourth issue relates to the estimation of beta, which takes up 52 pages (ES pp.142-94) of the AER's reasoning. Overall, it is clearer how the AER got to its answer for beta given the data which was in front of it (see, in particular pp.181 and 189-90) than it was in the 2013 guidelines, or the draft instrument in July (where it took 86 pages of reasoning and few stakeholders could understand what it was doing).[5] However, it is by no means clear how the AER would reach its conclusion, or what conclusion it would reach, in respect of beta if the raw data were different. This is an issue of the AER's reasoning; its role in the instrument is not to explain why 0.6 is the

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[5] *By contrast, the ERA explains its reasoning in its final guideline in just 22 pages and few submissions suggested more than cosmetic changes to the methodology for beta (ignoring low beta bias was a separate issue) on the grounds that, not only was it clear how the ERA got to its estimate this time, but the same methodology could be easily applied by anyone with any dataset, and the results would be the same as if the ERA did the work.*

correct answer for beta given the data it has chosen to consider, but rather to describe the methodology it uses to determine beta. These are not the same thing.

There are also some smaller sub-issues in relation to the estimation of beta. These include:

- The AER motivates its use of the longest available time series (much longer than would be commonly used by market professionals to estimate beta) on the basis that shorter estimates may be affected by one-off shocks or by cyclical factors (ES p.165). It illustrates this with a rolling one-year estimate of beta (ES p.166), which no stakeholder suggested was reasonable, and uses this to dismiss the use of five-year beta estimates, which several stakeholders did ask for. It is unclear why the AER did not seek to ascertain whether five-year beta estimates were subject to cycles, particularly when it had evidence that suggests that they are not.[6]
- More generally, in the same discussion, and again in defending the fall in beta allowances when empirical data on beta suggests it has increased (ES p.168), the AER notes the effects of bubbles and other short-term shocks, but provides no evidence as to whether these have actually had some effect. The potential for such things to impact beta is considered satisfactory by the AER and it does not consider it needs to test to see whether a hypothetical effect actually eventuates. This demonstrates an asymmetry in reasoning, particularly as the AER requires a very high (almost impossible) barrier before accepting evidence from models such as the Black CAPM.
- The AER motivates the use of long time series, and de-listed firms in particular (ES p.172) on the grounds that its consultants (Partington and Satchell) suggest that beta is stable through time. Partington and Satchell reach that conclusion (see their May 2018 report pp.7-8) after considering the AER's summary of different beta estimates from different points in time, and note that the "similarity" is in fact a range of between roughly 0.3 to 0.8.[7] However, the AER ignores Partington and Satchell's suggestion (ibid, p.8) that down-weighting past estimates is a "sensible suggestion". The AER's own experts have a rather more nuanced view of past firms than the AER does, but this does not seem to have influenced the AER's own reasoning.
- Responding to the views of some stakeholders that firms with unregulated activities may have higher betas, the AER provides a figure (ES p.174) showing the betas of different firms with different levels of regulated revenue. This is in fact a replication of a figure in the draft instrument explanatory statement (p.36), but the AER omits the notes to the original figure which show that the relevant estimates are made at points in time almost a decade apart.
- The fifth issue is with respect to the AER's rejection of the Black CAPM in particular, and the consideration of low beta bias in general. For our purposes in this document, the issue is not whether the AER was right or wrong to reject evidence gathered over 70 years in almost every jurisdiction - where it is examined and so well known that even its own consultant's textbook discusses it - but it is rather the process of reasoning.

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[6] *See p22 of CEG, Replication and extension of Henry's beta analysis, 21 September 2016 (Available at: https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-access-arrangement-2018-22/proposal) – Inside the link: "AusNet Services – Appendix 9. Rate of Return and Tax Allowance – December 2016" and on page 2 of "Appendix 9F Historic reports on reports on equity"*

[7] *The AER also ignore the evidence from the CEG study previously cited from November 2016 which suggests that 5-year betas (at least) are trending upwards through time.*

The AER has always made a distinction between empirical estimates of the zero-beta premium in the Black CAPM, or of low beta bias, and what it calls the "theory of the Black CAPM". The AER makes it clear (see ES p.83) that it was only the theory of the Black CAPM which was considered in 2013. The ENA, duly made the following suggestion (September 2018 response to draft instrument p.94):[8]

> *There has been no change to the Black CAPM evidence in any respect since the 2013 Guideline. In this area there have been no developments in financial theory, in which case "the theory of the Black CAPM" and the "theoretical principles underpinning the Black CAPM" remain identical to the evidence considered in 2013.*

Since the AER used only the "theory of the Black CAPM" (not empirical assessment of low-beta bias) in 2013, and since it has down-weighted the importance it gives the Black CAPM in 2018 compared to 2013, one might expect the AER to focus on changes it has perceived in the theory of the Black CAPM which would cause the change in weighting. The main focus of its reasoning (ES pp.202-17) is on problems with empirical estimation of the zero-beta premium in the Black CAPM and of quantification of low beta bias in general (both issues canvassed widely in 2013, and in subsequent determinations; we see nothing new in the AER's discussion), and the AER directly addresses the ENA's suggestion right at the end of the discussion when it concludes by saying (ES pp.216-7):

> *We disagree with the view that not using the theory of the Black CAPM represents a change to our approach. We apply the foundation model approach. This uses the Sharpe-Lintner CAPM as the foundation model to estimate the return on equity and a range of relevant information to inform and crosscheck the parameter estimates. We consider all relevant material, including the Black CAPM, on their merit and suitability for our regulatory task. A review that focuses largely on changes in finance theory to drive our exercise of judgement would be a highly theoretical approach to achieving legislative objectives. In exercising our judgement, we recognise the potential for parameters to have a range, underlying uncertainty and the need to assess the relative merit of all the material/evidence before us.*

What the AER appears to be saying is that it relied only upon the theory of the Black CAPM in 2013, but that it proposes now not to rely upon the theory of the Black CAPM any longer because making changes to what is considered only when theory changes would be unsound. We submit that this is remarkably thin reasoning to support a change in approach with such significant consequences.

There are some other, smaller issues in respect of the AER's treatment of evidence pertaining to the Black CAPM, and low beta bias more generally. These include:

- The AER notes that low beta bias has been observed in academic research and finance textbooks (ES p.206), but that it has not seen evidence that it is factored in by investors when forming expectations. In fact, submissions to the AER made it clear how extensively the

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[8] *APGA and Ausnet made the same point in presentations before the AER Board and submissions (ES p201)*

phenomenon has been documented, and it would appear that the onus of proof ought rather to be on someone seeking to show it is not considered. In fact, the AER has undertaken no analysis to understand what models or otherwise investors actually use.[9]

- The AER posits a number of factors which might be driving the empirical finding of low beta bias in actual return studies (ES Table 18 pp.211-13). Some of these (interest rate movements and macro-economic factors) would appear to be the very systematic risks that the AER elsewhere (ES pp42-6) indicates ought to be rewarded. Others appear to be market imperfections which all investors would face (contracting difficulties), which must by definition influence expectations, or appear to be defined as problems only if the CAPM is held to be true ("overpricing" of high beta stocks; where it is clear that the reference point for judgement is the price that the CAPM would define as true). Finally, the AER notes that a lack of equilibrium in the marketplace may cause tests of the CAPM to perform poorly, but ignores the implications of that lack of equilibrium on the decision to use the CAPM (an equilibrium model) in the first instance.
- The evidence from Frontier (see ES pp.217-19), which uses the only data one can find in respect of investor expectations, analyst reports, is rejected largely on the basis that analyst forecasts indicate a degree of "upward bias". However, the AER doesn't consider what the benchmark is to measure such upward bias against. Usually, analysts are held to be biased when compared with actual returns which subsequently eventuate (which the AER alludes to on ES p.218). However, if the only evidence which can be systematically tested in respect of expected returns indicates an upwards bias against actual returns, and a large body of literature indicates that those actual returns are upwards biased (for low beta stocks) when compared to the theoretical predictions of the CAPM, then it is not clear how Frontier's evidence does anything but support the conclusions drawn from considering actual returns alone – unless the AER has already concluded that the CAPM is the benchmark against which all else should be measured. This suggests a breakdown of reasoning.

The sixth set of issues relates to MRP, around which there are several issues of reasoning in addition to considerations in respect of the Wright CAPM covered above. These include:

- Survey evidence was dismissed (ES p.237) despite recent survey results showing higher results than in recent years. The AER dismisses this evidence partly on the basis that some survey respondents might be increasing the MRP estimate in times of low risk-free rates, which it had decided not to do (ES pp.232-5), and partly because a smaller number of respondents might make recent surveys less relevant. There are two issues here. Firstly, the AER is supposed to consider market expectations, and it seems odd to dismiss evidence that some survey respondents (who make investment decisions) might increase MRP estimates in times of low interest rates because the AER had decided that it had not found evidence of

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[9] *Apart from reference to Partington and the model "standing the test of time", the only actual reference appears in Table 18 (ES p213), referring to an unpublished paper by a consultant for a UK regulator (see https://www.ukrn.org.uk/wp-content/uploads/2018/06/2018-CoE-Study.pdf for the original paper), which the AER suggests indicates that the "CAPM still approximates investor behaviour well". However, examining the actual reference, this is not what the paper says. It says few investors will actually say they use the CAPM (p19 from the report), and instead the focus ought to be on whether investor behaviour is consistent with the CAPM, or with other factor loadings (say, those found in the Fama-French Model). The paper actually concludes (p20) that the CAPM reflects aggregate investment behaviour well in respect of how funds are allocated to equity managers (the part the AER quotes, selectively), it ultimately concludes "Thus the evidence suggests that investors pursue "CAPM alpha", consistent with the underpinnings of CAPM. We therefore conclude that whilst factors might influence investor expectations, they do not change the cost of equity". This is somewhat ironic given that the AER is so adamant that the very same "CAPM Alpha" factors, should not be considered as something investors pay attention to, and thus that regulators ought to reward (ES p207)*

negative correlation between the two variables. It is not clear whether the AER believes it should be basing its conclusions on what market participants think, or whether it believes it should draw its own conclusions first, and then judge whether what others think is correct or not. Secondly, a few pages earlier (p.234), the AER suggests that ENA evidence from surveys cannot be used because the ENA does not identify precisely why uplifts are occurring. But on p.237 the AER suggests it can ignore this same evidence based solely on mistakes it thinks survey participants might be making. It does not seem reasonable to require such a differing set of standards in respect of evidence; if anything, the AER should hold itself to a higher standard than it holds other participants, not a lower standard, because it makes the final decision.

- In discussing the length of the averaging period (ES pp.241-4), the AER considers that it is important to give weight to more recent time periods because of their greater relevance, whilst industry participants (and Dimson, March and Staunton) suggest longer time periods for statistical robustness. It is not clear why the AER argues in this way for MRP, when for beta it (and industry; which one might expect to act self-interestedly) makes the opposite argument, suggesting that longer time periods are more relevant because of the susceptibility of shorter periods to shocks etc. Indeed, when assessing the DGM, the AER rejects evidence put forward by HoustonKemp (ES p.259) on the basis that the time period considered is one of consistently falling interest rates and thus not representative of the general relationship between GDP growth and dividends. Yet it suggests the most recent period of historical data for the MRP (ES pp.243-4) is a more relevant period for estimating the MRP, despite this being the exact same period HoustonKemp used in its study. It is not clear why the AER would reach these two different conclusions.
- More broadly, HoustonKemp only presented the evidence as a pragmatic way to address the issue of a wide range in dividend growth forecasts, not as a major new methodology. The AER's consultants (see ES pp.259-63) responded by suggesting a range of issues which might exist in respect of the empirical work HoustonKemp undertook,[10] but never tested whether they did exist or whether fixing these issues would lead to an outcome for the range of the dividend growth (the focus of the exercise) which was narrower than the AER started with. This is somewhat unhelpful in respect of advancing regulatory practice; if the DGM is a problem because the range of dividend growth values is large, but any attempt to narrow that range is dismissed because it might have errors, then it is not clear what could feasibly be done other than reject the model, because any way of fixing it is just too hard. It also contrasts with the approach the AER takes to say, beta where there are also a wide range of empirical issues (so many it takes the AER more than 50 pages to discuss them) and yet the AER is still able to work through and produce an answer. It is difficult to see how the AER is being balanced in its reasoning here.
- Network business stakeholders have argued (ES p.245) that the AER should use only the arithmetic mean because the WACC is formulated as an annual payment, not one which compounds. One of the AER's experts (Lally) has also made the same argument, and provided the AER with a proof of the correctness of this approach in the context of the AER's regulatory task. The AER chooses to ignore Lally on the grounds, partly, that they are examining the MRP

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[10] *And criticising the motivation of HoustonKemp, which the AER somewhat unprofessionally published as a finding in the instrument (ES p263).*

from the perspective of investor expectations, and, as investors hold market assets for more than one year, the geo-mean should be given some weight (ES p.246). However, the AER does not provide any evidence about the holding period of market investors; if this is less than one year, it is not clear whether it is appropriate to assume multi-year compounding in expected returns (and hence the geo-mean). This is another instance of the AER basing its conclusions on something that might be true, without checking whether it is or not.

- There has been some debate over the years in respect of the historical returns series whether the series developed by Brailsford et al (BHM) should be replaced by the NERA series. APGA submitted evidence that the latter has been identified as superior by Dimson, March and Staunton, whom the AER cite in many places as experts (see, for example, ES p.233), but the AER chooses (ES pp.248-9) not to change data series on the grounds that there is no material improvement from doing so.[11] It appears to be the AER's position that second best outcomes ought to be used, even when superior alternatives are easily available, only when some unidentified threshold of materiality is crossed. It is unclear how any change could be effected if this is the reasoning the AER adopts.
- One of the (many) reasons the AER gives in respect to its zero-weighting of the DGM is that it appears to indicate fairly constant returns to the market (ES pp.255-6), which is something the AER had considered elsewhere would be implausible. What the AER appears to be saying is that, because a modelling approach produces (using current data; unlike the Wright CAPM, the DGM is not a model which intrinsically produces stable market returns, as the AER seems to suggest on ES p.257) stable returns using current data, and the AER has previously developed a view that such stable returns are unlikely, it will reject the model producing these results. If incongruity between evidence and priors is a reason to reject the evidence, we are unclear how any reasoned and objective approach could prevail.
- Of the four conditioning variables the AER considers (ES pp.272-4) three appear to be at roughly the same level as they were back in 2013, and only implied volatility is lower. The survey results (also discussed above) appear to show a slight uptick. However, the AER still concludes that it was correct to lower MRP; as with the overall rate of return, it is not clear what role these cross checks are actually playing.

The seventh issue relates to the estimation of gamma. Overall, this is an area of much confusion for all stakeholders because of the complicated arguments the AER makes as it attempts to develop some kind of theoretical framework to underpin its work (see, for example, ES pp.321-9). The views of the experts, discussed at length in the concurrent expert sessions (see the joint expert report pp.69-71, and pp.91-121 of the proofed transcript of the second expert session) are that there is essentially no theoretical framework underpinning gamma as defined by the AER, and that the approach is instead a pragmatic one of (second session transcript p.117) finding "the right wrong number".

Within this overall framework, however, there are a number of issues of reasoning:

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[11] *The AER expand upon this by pointing out that errors alleged in respect of the BHM dataset are really not that bad, which hardly improves the logic of its argument. The AER also notes that the expert report does not show unanimous agreement (which in light of the fact that the cited page shows no dissenting comments on this point, is a rather generous interpretation of the phrase used in the report; "Reasons most experts agreed…"), which suggests that change from worse to a better approach ought to occur only if all experts are unequivocal in making that change. This is difficult to square with the AER retaining practices that some or most experts suggested had problems in the same expert report.*

- Consideration of the merits or otherwise of the ATO statistics takes up several pages (pp.335-8), and the AER has clearly put a lot of work into establishing in its own mind whether these statistics are sufficiently robust; even if some stakeholders disagree with the way the AER has done so. However, when it comes to the ABS data that the AER favours, the AER responds to concerns raised by industry by simply suggesting they are unlikely to be material (see Table 29 ES pp.363-5). There has been, for example, no attempt to discuss issues with the ABS in the same way the AER has actively sought engagement with the ATO. This does not appear to be balanced reasoning.
- The AER has responded to the concern raised by industry that its distribution rate based on only 20 firms from the ASX is unlikely to be representative of the BEE by moving to a study of 50 firms. It motivates this by suggesting that this set is better because it represents 62 percent of the market (ES p.343). However, it also rejects the approach of using tax statistics to estimate gamma directly (which gets around much of the concern about ATO data issues, by suggesting that this will give a market-wide distribution rate; ES p.337). This appears incongruous; surely the correct response to the issue of the 20-firm average not being representative would have been to find a sample set which is more representative, not to adopt an approach which moves one closer to the market-wide average which the AER has suggested is the wrong approach to use?[12]
- The AER notes the Independent Panel's suggestion that it reconsider its rounding policy (ES p.377), and this has ultimately led the AER to provide gamma to three decimal places. However, the Independent Panel Report (p.58) shows that the Panel's concerns were around the incentives to improve precision in estimates (particularly read in conjunction with its earlier comments around improving dividend drop-off study estimates, p.56, and improving understanding of the tax data, p.51). The Independent Panel did not say that it considered the data the AER had to date was sufficiently good to render a more precise estimate of gamma, and that it should therefore make a more precise estimate; it was focussing on removing barriers to future searches for more precise answers. Yet this is exactly what the AER has done, and stakeholders now have an answer to three decimal places formed by multiplying together input estimates that only have one and two decimal places; something which most maths courses would argue against.

The eighth and final issue relates to the AER's investigation of financeability (ES pp.392-405). The AER concludes that it will not make use of financeability assessments in determinations made under this instrument, but our focus is not on that decision, but rather the reasoning it adopts in considering the estimations of financeability it has made in this instrument. These follow on from work submitted by AGIG (see Tables 32 to 36 on ES pp.398-402, and the AER essentially expands the AGIG analysis of AGN financeability to the industry as a whole).

In its analysis, eight of the 28 businesses fail the financeability test that the AER has itself set, but the AER is relatively sanguine about this, noting that (ES p.402):

> *In response to our observation that these financial metrics are relatively low for some regulated firms (and materially below 7%) we have considered countermeasures firms might take to improve their financial metrics and if this*

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[12] *The AER did attempt to estimate the distribution rate for regulated energy firms, but there were problems with the data available for these firms, which the AER has acknowledged (ES pp352-4)*

> *could warrant a change in any of our benchmark WACC input assumptions. The key counter measure firms might take is to reduce their gearing (i.e. reduce debt capital and increase equity capital).*

In order to reduce gearing, the firm in question would need to either inject more equity, or retain dividends and not pay them out to equity holders, in order to have sufficient funds to pay down the debt. If the financeability failure was attendant to the operations of the actual firm (that is, due to the way the firm chooses to finance, it does not meet the benchmark), then this might be reasonable, and indeed this is the context in which Ofgem suggests similar countermeasures.[13]

Here, however, the context is different. The AER has found that the benchmark efficient firm is in danger of not being able to meet the benchmark efficient credit rating; as a direct function of the regulatory decision, and not due to inefficient actions made by the firm. Although the WACC might be relatively invariant to levels of gearing (see Figure 28 ES p.404, and note that the result obtains largely because the equity beta changes in the explanation given), this misses the point that equity is going to need to forgo some of its efficient income, or put in more than the efficient level of equity capital, in order to effect the change the AER proposes.

The AER is at liberty to ignore financeability, but the AER's evidence on financeability has arguably been misinterpreted by the AER when it concludes that there is essentially no problem if the benchmark efficient firm is unable, by design, to meet its benchmark efficient credit rating, save for taking actions outside those which the AER has suggested are efficient.

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[13] *See, for example, p56-7 in its December 2018 finance methodology annex, available from https://www.ofgem.gov.uk/system/files/docs/2018/12/riio-2_finance_annex.pdf*