

# Hedge market development project: Metrics

1 May 2014

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# Purpose of this paper

- Provide the WAG with metrics that may assist it to form a view on potential problems with the hedge market
- Seek feedback from the WAG
  - Are there any further metrics that would assist WAG to form a view?
- Define hedge market measures that the Authority may consider using on an ongoing basis

# Key findings – volume

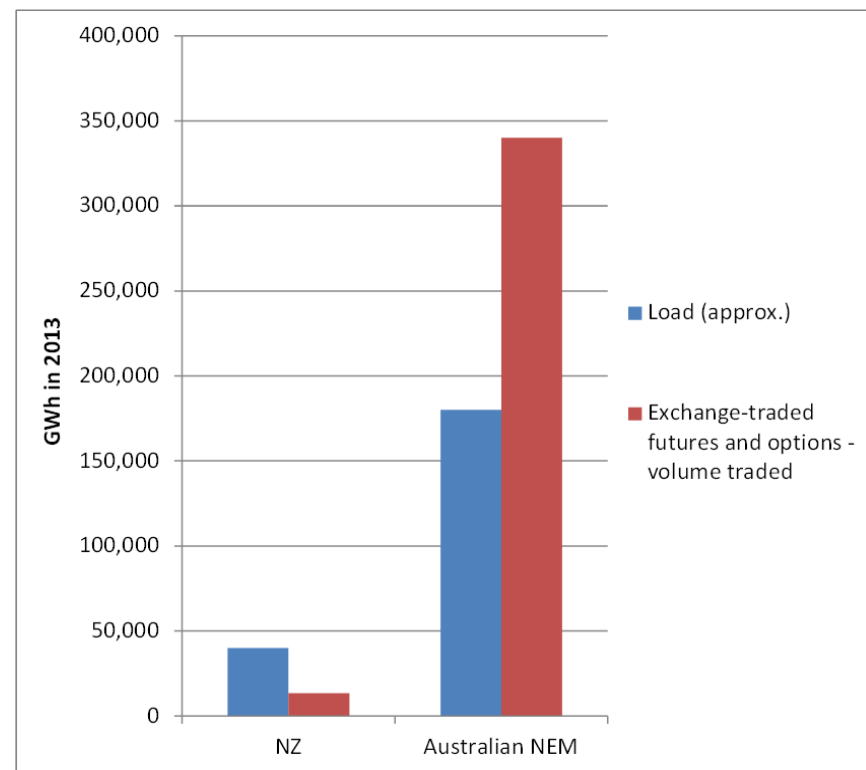
- ASX futures market is growing...



# Key findings – volume

- ...but the ASX is still much smaller in relative terms than the NEM equivalent...
- Further growth in the market has the potential to bring increased depth and liquidity and more competitive pricing

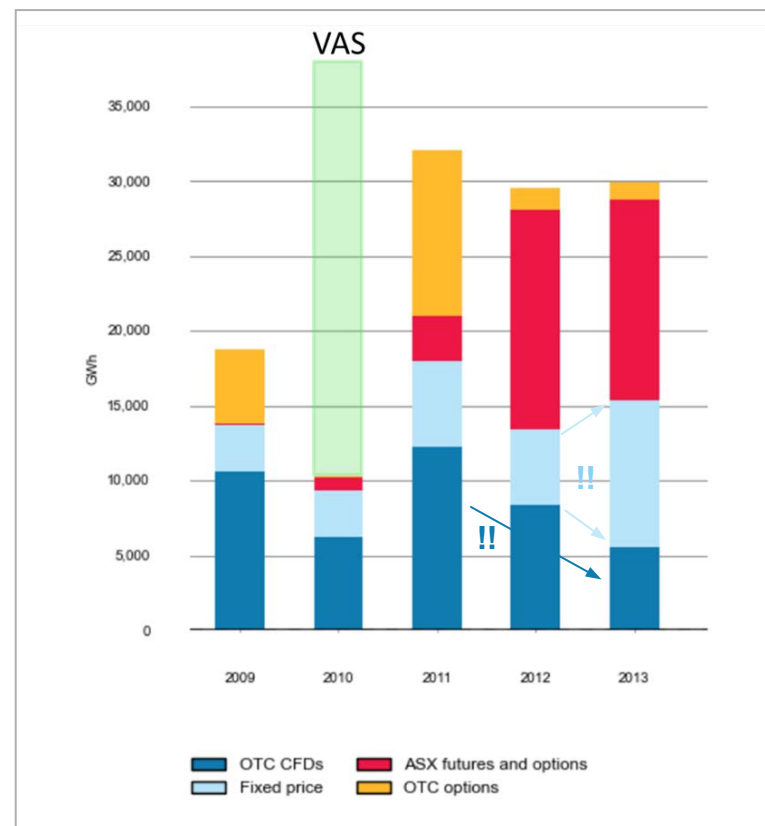
Traded volumes in 2013



# Key findings – volume

- OTC CfD market has shrunk relative to the ASX but still remains important
- OTC FPVV market appears to be growing
- FPVV market forms an important part of the hedge market and should not be overlooked in this project

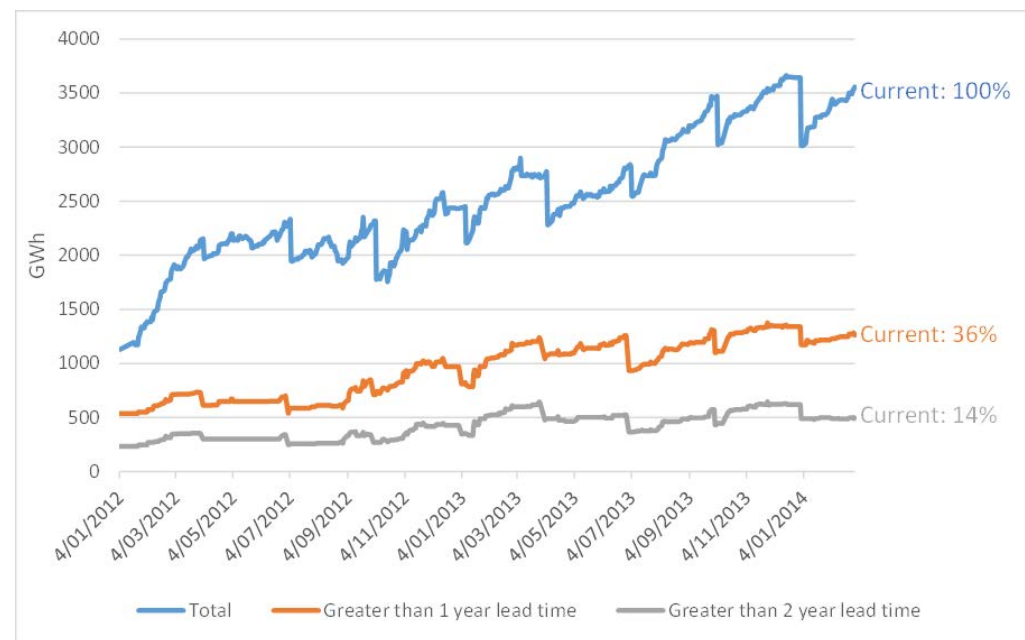
Traded volumes in recent years



# Key findings – volume

- It is possible to obtain hedge cover more than a year into the future on the ASX
- But trading on long lead times is still relatively light
  - It may be difficult for parties to establish a long term position

**ASX UOI by lead time**



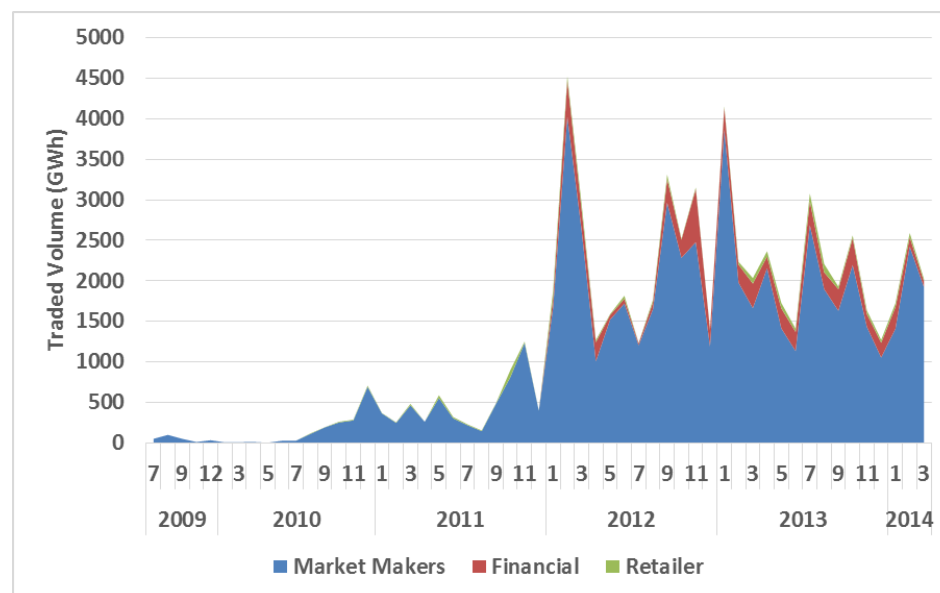
## Key findings – volume

- In contrast, a significant proportion of OTC CfDs extend two years or more into the future

# Key findings – volume

- Participation in the hedge market by financial institutions still appears to be relatively light
- Encouraging such participation may be an important part of growing the hedge market?

**Breakdown of ASX traded volumes  
(based on hedge disclosure data)**

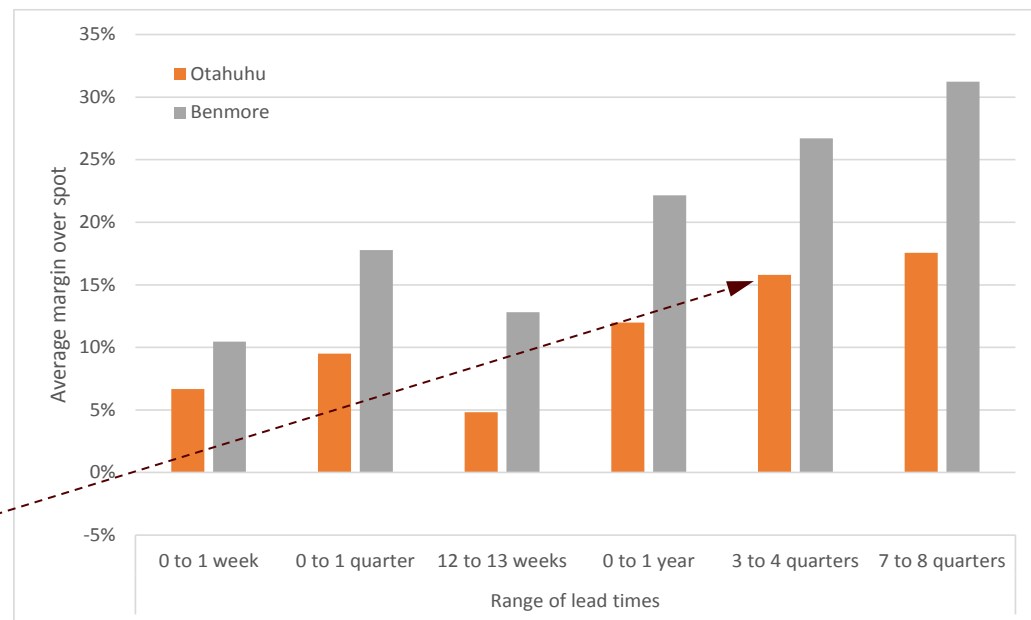




# Key findings – price

- ASX trades at a significant margin relative to spot
- Not yet clear if this reasonably reflects risk
- Particularly for products with lead time of a year or more
- These products have been observed to be at an average margin over spot of about 15% (at OTA)
- Long-term average could potentially be higher

**ASX margins over spot,  
for various lead times**



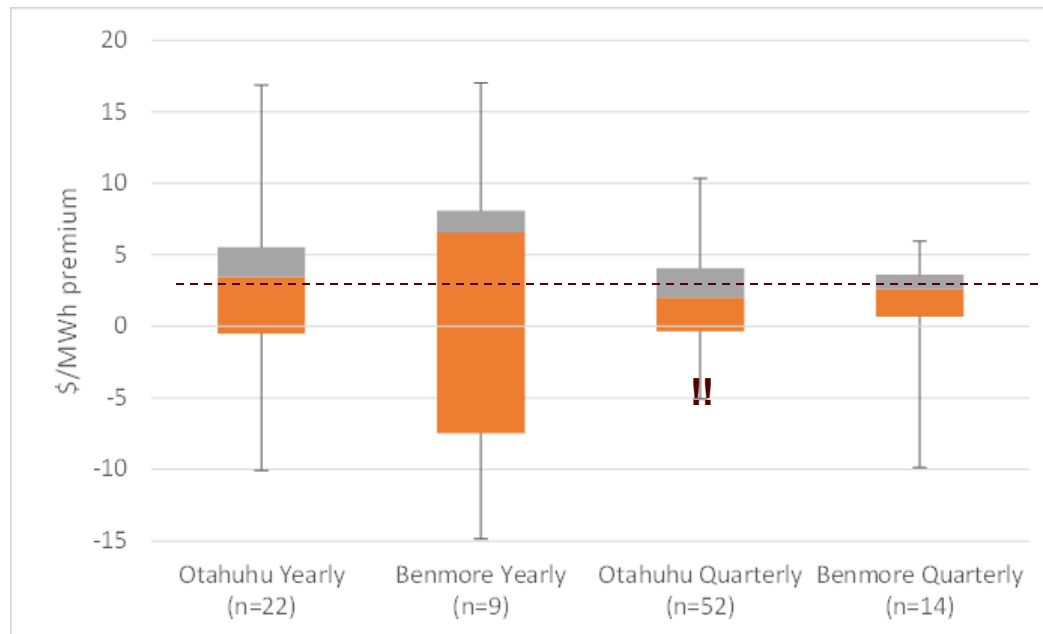
## Key findings – price

- Average ASX prices have been higher at Benmore than at Otahuhu, relative to the underlying spot price
  - But this difference may be arbitrated away to some extent in the future by trading in FTRs?

# Key findings – price

- OTC CfDs that are directly comparable to ASX futures appear to be priced only slightly above the ASX price

Differences in price between OTC CfDs and directly comparable ASX products



About \$3/MWh higher, in median terms??

## Key findings – price

- OTC FPVVs may be **at a reasonable margin above** OTC CfDs and futures
- Among OTC CfDs, margins appear higher for contracts with long lead times
- In contrast, long-term FPVV contracts **do not have higher margins than short-term contracts**
- Both for CfDs and FPVVs, it appears that **margins in** the South Island market may be **higher** than the North Island market
  - OTC CfD **margins** in Canterbury seem unusually high (although this is based on a relatively small number of contracts)

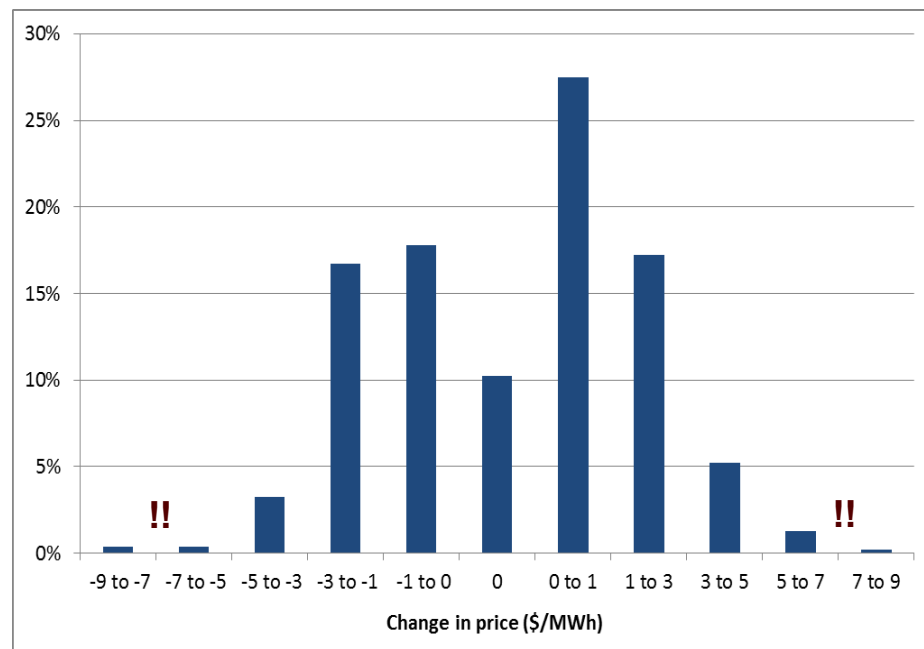
# Key findings – depth and liquidity

- Level of participation in the ASX and OTC CfD markets has increased over the last few years
  - Depth and liquidity of ASX market has improved since market-maker agreements were put in place

# Key findings – depth and liquidity

- There can be significant price movements from one trade to the next...
- It may sometimes be difficult for a participant to make substantial changes to their position in a short time, and at a competitive price

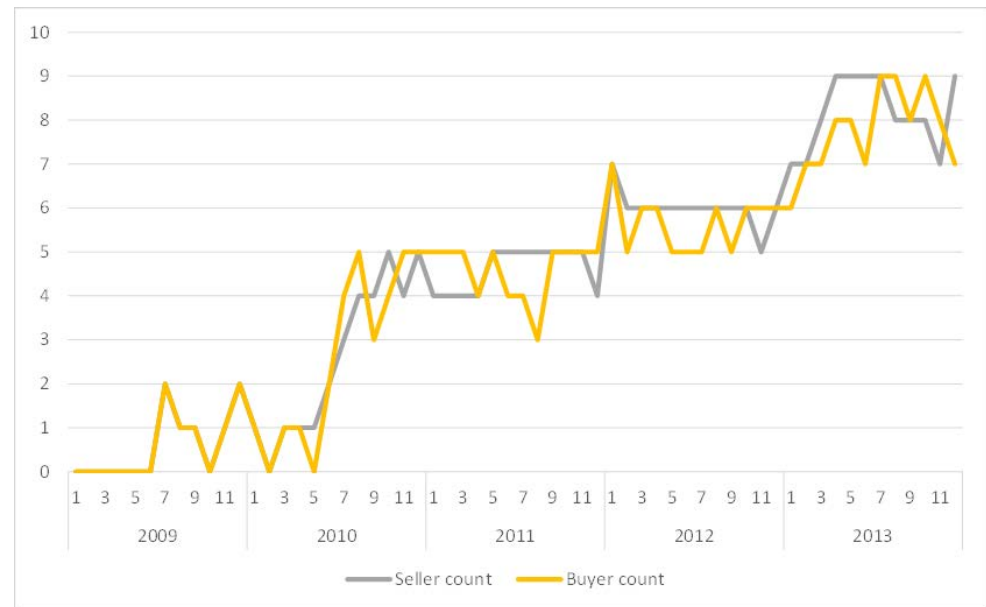
Distribution of changes in price from one ASX trade to the next, within 24 hours



# Key findings – depth and liquidity

- There **may be** scope to **improve** the depth and liquidity of the ASX market
- One possible avenue may be through encouraging broader participation...
- Another possible option may be moving to a smaller unit size

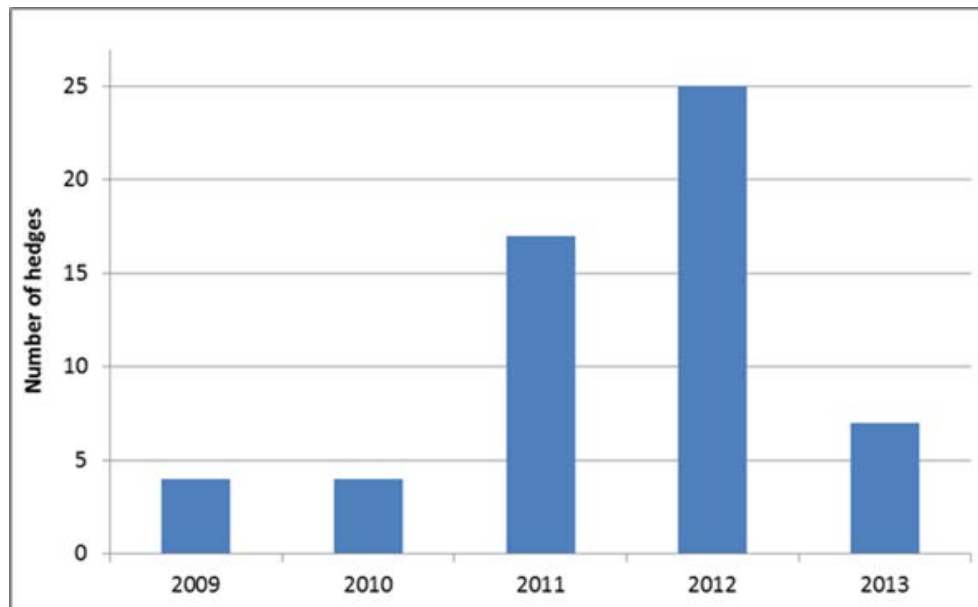
Number of participants in ASX  
(based on hedge disclosure data)



# Key findings – non-price barriers

- Hedge settlement agreements are being used intermittently by some participants to manage prudential requirements and credit risk

Number of HSAs by trading year

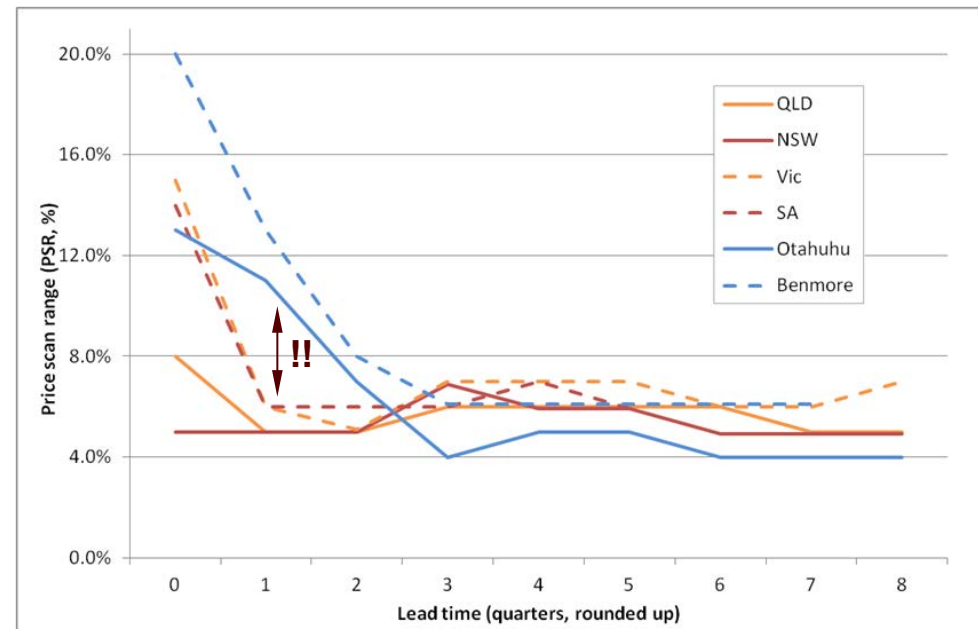




# Key findings – non-price barriers

- It is not clear whether the margins charged by ASX accurately reflect the level of price risk on various time scales
- It may be the case that traders in New Zealand electricity futures are paying unnecessarily high initial margins

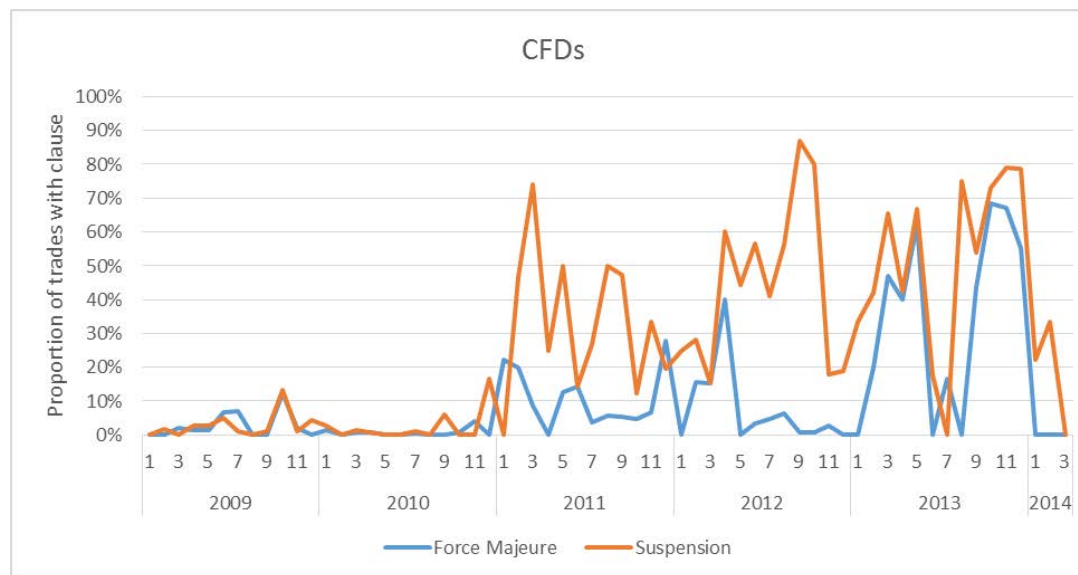
Initial margins required for Australian and New Zealand quarterly electricity futures on the ASX, as a % of the underlying



# Key findings – non-price barriers

- Many OTC contracts still employ force majeure and/or suspension clauses, which may reduce their value to the buyer and potentially limit the range of hedging strategies buyers may employ

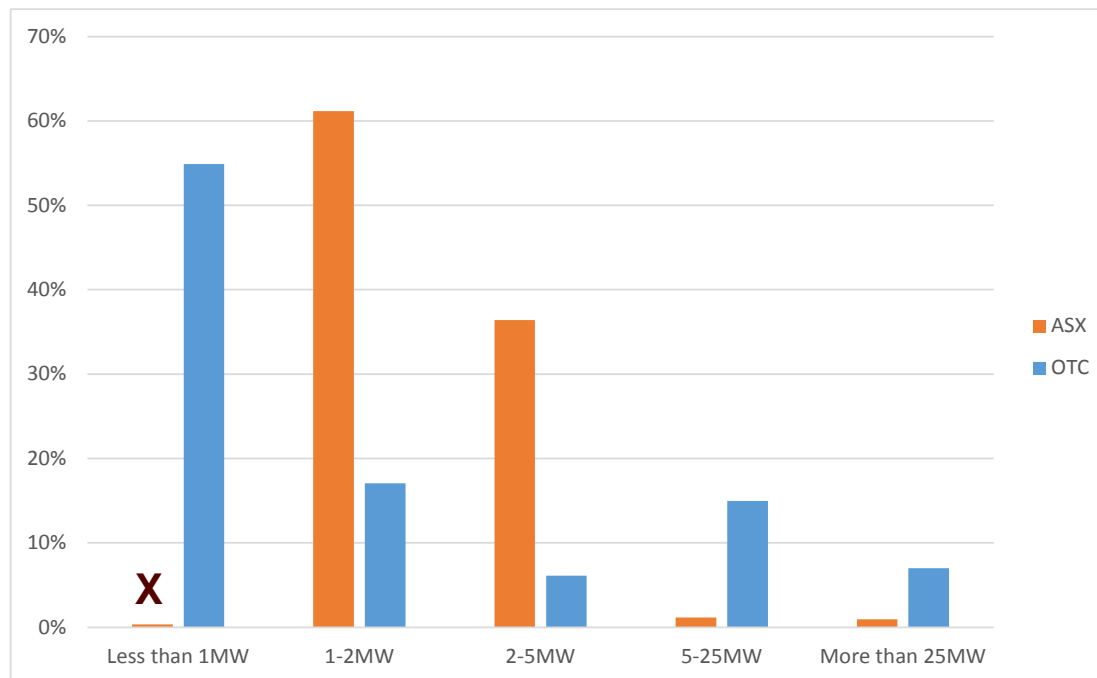
## OTCs with force majeure and/or suspension clauses



# Key findings – non-price barriers

- It is possible that moving to a smaller unit size might support participation, depth and liquidity in the ASX market

Distribution of trade quantities since 2009



Q1. Does the WAG agree that there is scope for further growth in the ASX futures market, and that such growth could bring market benefits?

Q2. Does the WAG agree that OTC markets remain important, and that growth in the ASX futures market has the potential to drive improvements in the OTC markets?

Q3. Does the WAG consider that liquidity on longer time frames is important?

If so, why is it important, and what could be done to support liquidity on longer time frames?

Q4. Does the WAG consider that hedge market participation by financial institutions is important?

If so, why is it important, and what could be done to support participation by financial institutions?

Q5. What further analysis of hedge volumes could assist the WAG to reach conclusions about the efficiency or competitiveness of the hedge market?

Q6. Does the WAG have views on the extent to which the ASX is competitively priced?

Q7. Does the WAG have views on the extent to which OTC CfDs are competitively priced?

Q8. Does the WAG have views on the extent to which OTC FPVVs are competitively priced?



Q9. In the part(s) of the hedge market where prices are less competitive, what should be done to support competition?

Q10. What further analysis of hedge prices could assist the WAG to reach conclusions about the efficiency or competitiveness of the hedge market?

Q11. Does the WAG consider that there is scope for greater depth and liquidity in the ASX market, and that this would be beneficial?

If so, what could be done to support depth and liquidity?

Q12. What further analysis of hedge depth or liquidity could assist the WAG to reach conclusions about the efficiency or competitiveness of the hedge market?

Q13. Does the WAG have a view on the reasons why some participants do not use HSAs, and others only use them sporadically?

Q14. What value does the WAG see in HSAs?

Q15. Does the WAG have a view on whether the ASX prudential regime is appropriate?

In particular, are initial margins excessive?

Q16. Does the WAG consider that the ASX unit size of 1 MW is appropriate?



Q17. What further *quantitative* analysis of non-price barriers could assist the WAG to reach conclusions about the efficiency or competitiveness of the hedge market?