Calculating Required Prudential Level

SPSTG

21 November 2012

Overview of presentation

- WAG recommendations
- FTR required prudential levels
- Calculating general account prudentials

WAG recommendations

- Prudential security should cover:
  - outstandings
  - accruals out to next settlement day
  - initial margin, being the product of:
    - 21 days
    - daily quantities
    - estimated prices (ASX based, determined quarterly), plus an adder to achieve PLGD=26%

FTR prudential levels

- total reqt = general reqt + FTR reqt
- FTR reqt is the sum of the requirement for each FTR
  - Some allowance is made for netting off FTRs in different directions
  - For each FTR:
    - FTR reqt = initial margin + acquisition cost – est. hedge value

NZX has recently consulted on this

Estimated in various ways e.g. recent trades

Calculating general account prudential requirement

General a/c: 1. Outstandings

- Could calculate this broadly as at present
- Components of outstandings:

Amounts that will end up on payer invoice	Amounts that will end up on payee invoice
Ancillary services cost recovery	Ancillary services reward payments
(-) MRDA rebate	(-) MRDA payments for rights
Electricity purchases	Electricity generation
Constrained on/off cost recovery	Constrained on/off rewards
GST	GST
HSAs assigned to payer invoice	HSAs assigned to payee invoice

General a/c: 2. To next settlement

- Could do this largely as at present by projecting based on recent history
- Could treat it as an extension of the 21 day initial margin period

General a/c: 3. Initial Margin

- WAG focussed on this bit:

Amounts that will end up on payer invoice	Amounts that will end up on payee invoice
Ancillary services cost recovery	Ancillary services reward payments
(-) MRDA rebate	MRDA payments for rights
Electricity purchases	Electricity generation
Constrained on/off cost recovery	Constrained on/off rewards
GST	GST
HSAs assigned to payer invoice	HSAs assigned to payee invoice

General a/c: 3. Future exposure

- Future exposure calculation can consist of:
  - An initial margin applying to electricity purchases/generation
  - Estimated exposure over 21 days to the other items

Amounts that will end up on payer invoice	Amounts that will end up on payee invoice
Ancillary services cost recovery	Ancillary services reward payments
(-) MRDA rebate	MRDA payments for rights
Electricity purchases	Electricity generation
Constrained on/off cost recovery	Constrained on/off rewards
GST	GST
HSAs assigned to payer invoice	HSAs assigned to payee invoice

Treatment of generation

- Should generation be treated (for IM purposes) as reducing the Q used in the IM calculation?
- While 21 days may be appropriate for purchases, is it appropriate for generation?
- Should we assume the participant will generate *nothing* after default (it can't pay staff to safely operate plant)?

Treatment of HSAs (1)

- Should HSAs affect the Q over which initial margin calculated?
- Is 21 days appropriate for HSAs?
- Could have a de-lodgement process
  - CM/EA could de-lodge an HSA if one party defaults (and if CM has exposure to that defaulting HSA)
  - Counterparty to the underlying derivative contract manages the post-delodgement credit risk
  - Counterparty could cancel contract and resell to someone else
  - We want to avoid a situation where CM remains exposed to a defaulting participant's out-of-the money HSA for many months, and can't get out of that exposure
  - At present, either counterparty can unilaterally de-lodge the HSA

Treatment of HSAs (2)

- Remove dependence on arbitrary assignment of HSA to either payer or payee invoice?
  - At present, that assignment affects allocations when there is a short payment
- A party with only HSAs (e.g. a financial institution that becomes a settlement participant) could be exposed to low prices. Should we require prudential security to cover that risk?

Treatment of nodal issues

- For IM purposes, assume all quantities are at 1 of 2 nodes: NI or SI

Price for energy in IM calculation

- Set 1 month in advance of a quarter, and applied during whole quarter
- Set at average ASX prices in previous month + adder
  - The avg over a month avoids incentive for ASX price manipulation
- Market will be short of prudentials if conditions become dry
- The benefit is easier retail market entry
- The adder might be around $10 to $20/MWh
  - WAG suggested it should be set to achieve a PLGD of 26%
  - As long as it is in the range of around $10 to $20/MWh, the exact PLGD calculation is probably not too important. The key is that it isn't $100/MWh, is known well in advance and doesn't change frequently

Any questions/comments?

WAG recommendation 1

Prudential security cover: A purchaser's required prudential security should be changed to cover the following components:

i) outstandings: that is, the amount the purchaser already owes for the electricity it has used, or which its customers have used; and

ii) an estimate of expected accruals out to the end of the next settlement day; and

iii) an 'initial margin' to cover the liability expected to accrue during the exit of a defaulting purchaser (see further below).

WAG recommendation 2

Setting the initial margin: The initial margin would be set to cover the liability expected to accrue during the exit of a defaulting purchaser. The initial margin would be calculated as the product of:

i) the time over which it is considered likely that a defaulting participant could be exited from the market, measured in days (the default is 21 days);

ii) the daily quantities expected to apply during that period; and

iii) the price (plus an adder) expected to apply during that period.

The price should be set quarterly, one month in advance of each quarter and should be based on average ASX futures prices, measured over the previous month, for the quarterly product relating to the next quarter. The adder should be set to target a probability of loss given default (PLGD) of around 26%.