

United Energy Distribution Pty Limited
ABN 70 064 651 029

Multinet Gas Distribution Partnership
ABN 53 634 214 009



28th November 2013

United Energy and Multinet Gas
6 Nexus Court
Mulgrave VIC3170
PO Box 449
Mt Waverley VIC 3149
T 03 8846 9900
F 03 8846 9999
www.uemg.com.au

Our Reference: UE.SU.01

Mr Blair Burkitt / Ms Belinda Sheldrick
Network Operations and Development
Australian Energy Regulator
Level 35, The Tower,
360 Elizabeth Street,
MELBOURNE VIC 3000

BY EMAIL TO: Blair.Burkitt@aer.gov.au

Dear Blair and Belinda,

SUBMISSION TO THE AER'S DRAFT RATE OF RETURN GUIDELINE (AUGUST 2013)

The term to maturity for the return on debt: APA Group floating rate note, Bloomberg identifier EJ3202961

The AER has analysed the data provided by regulated network businesses on the types of debt outstanding, and on the term to maturity at issuance. I understand that the AER has considered a floating rate note issued by the APA Group in August 2012 with a maturity date of 30th June 2072. According to Bloomberg, the issue size of the floating rate note was \$515 million.

The APA floating rate note has its first call date on 31st March 2018. Thereafter, the possible call dates occur at the end of each quarter.

The AER has treated the APA floating rate note (with ISIN AU0000AQHHA7) as though it was known when the bond was issued, and is known today, that the call option will be exercised by the issuer on 31st March 2018. The AER has therefore interpreted the bond as a plain vanilla instrument with a maturity date of 31st March 2018. In other words, the AER believes that the term to maturity of the floating rate note was less than six years at issuance, and that the bond now has a remaining term to maturity of less than five years.

Duration is a generic concept that indicates the responsiveness of a bond to a change in interest rates. For an option-free bond, Macaulay duration is a weighted average time until repayment, measured in units of time such as years. Fabozzi shows how Macaulay duration can be obtained by differentiating the expression for the price of a bond with respect to the required yield and then collecting some terms¹.

¹ Fabozzi (2013), Bond Markets, Analysis and Strategies, eighth edition, Frank J. Fabozzi, chapter 4.

Modified duration is a measure of the sensitivity of a bond's price to interest-rate changes, assuming that the expected cash flows do not vary with interest rates. Modified duration records the percentage change in price for a small increment or decrement to the interest rate. In contrast, effective duration records the responsiveness of a bond's price taking into account that the expected cash flows will change as interest rates alter due to the embedded option².

Although the two variables are conceptually distinct, Macaulay duration and modified duration are closely related as shown by equation 1 below.

Equation 1:
$$\text{Modified duration} = \frac{\text{Macaulay's duration}}{\left(1 + \frac{\text{Yield}}{\text{Compounding Frequency}}\right)}$$

Equation 2:

$$\text{Effective duration} = \text{Change in price of bond resulting from a parallel shift in the yield curve}$$

For a coupon-paying bond (including those which trade at par values), the modified duration and Macaulay duration are less than the term to maturity. For a zero coupon bond, the Macaulay duration is equal to the term to maturity, but modified duration will be lower.

If, as the AER has asserted, there was absolute certainty that the APA Group floating rate note was going to be called in March 2018, then the forecast cash flows from the note would be insensitive to small changes in interest rates. In these circumstances, modified duration would be equal to effective duration, and the values of both measures would be less than the remaining term to the first possible call date.

Analysis of APA Group floater, EJ3202961

The AER has not provided an explanation as to how it has determined that the bond will be called on 31st March 2018. The question of whether the bond will be called on that date will depend on the margin that APA will have to pay if it calls the bond and replaces it with a new issue. If APA can issue a new floating rate note with a margin that is sufficiently low, then it will call the bond and issue a new note. If, on the other hand, APA cannot issue a new floating rate note with a margin that is sufficiently low, then it will not call the bond. Since the margins at which APA will be able to issue new notes at dates in the future are unknown today, the question of whether APA will call the floating rate note with ISIN AU0000AQHHA7 on 31st March 2018 is also unresolved today.

Methods exist, however, for generating assessments of what is the most probable date on which the bond will be called and Bloomberg provides such assessments. The most probable date on which the bond will be called will depend on a number of factors including the volatility of the margin that APA will have to pay if it issues new debt.

When a bond is callable, the practice is generally to calculate a yield to worst, which is the smallest of the yield to maturity and the yield to call for all possible call dates³. Information about the APA Group floating rate note is available from the Bloomberg service, and a screen shot is provided as an appendix to this letter.

Under the yield and spread function (YAS), Bloomberg has adopted the default convention of measuring the yield to worst, and, as at 28th November 2013, was reporting that the modified duration credit is 7.9. According to Bloomberg, the result for modified duration is predicated on a "work-out" date for the floater

² Fabozzi (2013), Bond Markets, Analysis and Strategies, eighth edition, Frank J. Fabozzi, chapter 17.

³ Fabozzi (2013), Bond Markets, Analysis and Strategies, eighth edition, Frank J. Fabozzi, chapter 17.

of 30/12/2029⁴. Hence, the default assumption is that the bond will be called at the end of December 2029.

Bloomberg help files explain that modified duration credit represents a percentage change in price associated with a 100 basis point movement in credit spreads. In view of Bloomberg's result (and mention of a call date on 30/12/2029), the AER cannot justify the adoption of a remaining term to maturity of 5 years. The AER would be committing an error if it were to continue to set the remaining term to maturity of the APA floater at less than five years. United Energy and Multinet Gas would like to request the AER to reconsider its position on the matter of the tenor of the APA Group floating rate note.

Sample selection bias: AER scatter plot of the term of bonds at issuance

Figure 1 that is labelled "Businesses' term at issuance of bonds" appears to show that the average term at issuance of the bonds issued by regulated utilities has been declining over the last 20 years. The universe of bonds that the AER employs, however, is presumably all of those bonds that have yet to mature. Therefore, one would expect the figure to provide this appearance even if the average term at issuance of the bonds that regulated utilities issue had been constant (that is, not rising and not falling) over the last 20 years. Figure 1 is therefore potentially misleading.

Bonds with a maturity at issuance of less than 20 years, issued 20 years ago, will have already matured and so will not trade today. Such bonds would have existed at one time but they no longer exist and so they do not appear in the graph. Bonds with a maturity at issuance of less than 15 years, issued 15 years ago, will have already matured and so will not trade today. These bonds would also have existed at one time but again no longer exist and so do not appear in the graph. Bonds with a maturity at issuance of less than 10 years, issued 10 years ago, will have already matured and so will not trade today. They similarly do not appear in the graph. So, to summarise, the graph shows – no more and no less – that long-term bonds tend to survive longer than short-term bonds.

Final comment

I urge you or your staff to make contact with me, by telephone on (03) 8846 9854, if you have any queries about the submission.

Yours sincerely,

Jeremy Rothfield
Network Regulation and Compliance Manager

Enclosures:

Appendix 1 – A snapshot from the yield and spread analysis applied to the APA Group floating rate note

Appendix 2 – Correspondence from Belinda Sheldrick, Australian Energy Regulator

⁴ In correspondence, Bloomberg has explained that the work-out date is the "most likely redemption date for the security given the current price and redemption schedule". Bloomberg has also explained that it uses the Hull-White one-factor model to price the bond.

<HELP> for explanation.

APAAU 0 09/30/72 Corp

90 Feedback

Yield and Spread Analysis

95 Buy

96 Sell

97 Settings

1) Yield & Spread

2) Graphs

3) Pricing

4) Descriptive

5) Custom

APAAU 0 09/30/72 (AU0000AQHHA7)

Price 99.990000 Settle 12/02/13

Gross 99.990000

Traded Margin (bp) 465.0689 Wst

Traded Margin Risk 7.90

Workout 12/30/2029 @ 100.00

Floater Information

Benchmark BBSW3M Assumed Rate 5.35307

Quoted Margin 450.00 Coupon 7.05670

Next Pay 01/01/14 Coupon Freq Quarterly

Index to 01/01/14 Refix Freq Quarterly

2.557999

Invoice

Face 1,000 X

Principal 99,990.00

Accrued (62 Days) 0.00

Total (AUD) 99,990.00

Swap

Term Freq Rate

Cash 2.5000

1 Month 2.5600

2 Months 2.5700

3 Months 2.6000

4 Months 2.6100

5 Months 2.6100

M/M Equiv to Next Fix

● ACT / 360 ● ACT / 365

Price at Refix 100

on 01/01/14 30 Days

Mmkt 7.094042

Risk

M Dur (IR) 0.083

M Dur (CR) 7.903

Risk (CR) 7.903

DV 01 on 1MM 790

Floater Coupon History

Date Rate

10/01/13 7.05670

01/01/14

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2013 Bloomberg Finance L.P.
 SN 534909 EST GMT-5:00 H439-254-3 28-Nov-2013 03:49:52