ACI have announced that with effect from 5th September 2011 Topic 2 of the ACI Dealing Certificate examination question database is being amended to reflect the quotation/pricing methodology currently followed in the UK Treasury Bill market.

UK Treasury Bills

United Kingdom Treasury Bills are sterling denominated unconditional obligations of the UK Government with recourse to the National Loans Fund and the Consolidated Fund. They are negotiable bearer zero coupon instruments issued in order to provide short term funding to the UK government. Treasury Bills qualify as zero-risk weighted instruments for the purposes of determining capital adequacy under the 1988 Basel Capital accord.
UK Treasury Bills are issued in GBP with a minimum denomination of GBP 25,000 and normally have a tenure of 1 month (approximately 28 days), 3 months (approximately 91 days), 6 months (approximately 182 days and can also occasionally be issued for12 months (up to 364 days).

UK Treasury Bills are offered on a weekly tender basis by the Debt Management Office (DMO) – an agency of the UK Treasury and are issued on a money market yield basis, with the quotation of yield being up to three decimal places. They are settled according to the following price/yield formula:

$$\boxed{\text{secondary market proceeds} = \frac{\text{face value}}{\left(1 + \left(\text{yield} \times \frac{\text{days left to maturity}}{\text{day base}}\right)\right)}}$$

<ACI preferred>

The DMO announces the size of the following week’s tender and the maturity of bills on offer at the previous week’s tender. These announcements are made on the DMO’s information service pages on Reuters and Bloombergs.

On receipt of bids from eligible participants the DMO ranks bids for each maturity on offer by yield. T-Bills will then be allotted to those bids that are at or below the yield deemed by the DMO to be the highest accepted yield. UK T-Bills can be held in CrestCo and Euroclear.

UK T-Bills issued at tenders mature on the first business day of the week, four weeks thirteen weeks, twenty six weeks or fifty two weeks respectively following the issue date, which will be the first business day of the week following the tender. UK T-Bills are redeemed at face value.

For further information on the UK T-Bill tender process see the DMO website: www.dmo.gov.uk.

UK Treasury Bills in the Secondary market

Once “in circulation” Treasury Bills can be bought and sold in the secondary market. T-Bills used to be quoted and traded as discount operations with the appropriate tenor discount rate being applied to the face value of the T-Bills. To standardise their quotation and trading with the repo market (on which collateral many repos are based) the secondary market in UK Treasury Bills has changed to a quotation and pricing based on a true yield and the formula is included on the ACI Formula sheet under the heading “Discount paying instrument quoted as a true yield”

There is a highly liquid secondary market and holders of T-Bills are able to rediscount them at any time prior to maturity. The price paid/received is then the face value *less* the discount amount as calculated.

UK Treasury Bills

UK Treasury Bills along with a range of other short term Sterling money market securities traded in London are in the process of complete de-materialisation. Whilst T-Bills can still be issued in security printed hard copy the majority of transactions are electronically settled (transfer of title) across CrestCo as Eligible Debt Securities (EDS).

UK Treasury Bill - London money market quotation

Secondary market - Market maker quotes:

T-Bills: **BID - OFFER for the securities** (High-Low in yield rate terms)

International money market quotation

Secondary market - Market maker quotes:

T-Bills: **OFFER - BID for the securities** (Low - High in yield terms)

Care! Here the market terminology refers to the securities being traded. The London market switches round the Bid – Offer rates quoted elsewhere. Dealing logic and calculations are unaffected. **ACI Dealing Certificate** examination questions should always make it clear in which manner any rate quotation is being made.

In the secondary market the Market maker in London is in effect quoting “Buy - Sell” rates for T-Bills as a two way price and the dealing terminology relates to the movement of the securities.

UK Treasury Bill rates

UK T-Bills in the Secondary market are also quoted and priced as a “Discount paying instrument quoted as a true yield”.

Discount paying instrument quoted as a true yield (secondary market proceeds)

To calculate the price (secondary market proceeds) on a financial instrument where the discount is calculated by reference to a true yield and applied to the price paid).

$$\text{secondary market proceeds} = \frac{\text{face value}}{\left(1 + \left(\text{yield} \times \frac{\text{days left to maturity}}{\text{day base}}\right)\right)}$$

<ACI preferred>

Example

What will you pay for 1 month UK T-Bills with a face value of GBP 5,000,000.00 with 30 days to maturity at a yield of 5.25 p.c.?

Proof

To calculate the price to be paid for these UK T-Bills as described:

$$\textbf{GBP 4,978,517.36} = \frac{5{,}000{,}000}{\left[1 \textit{ plus} \left[0.0525 \text{ X } \frac{30}{365}\right]\right]}$$

<ACI preferred>

US Treasury Bills

US Treasury Bills (T-Bills) are US Dollar are money market related instruments described as “Discount paying instruments quoted at a rate of discount” (the other type of Discount formula on the ACI formula sheet) with interest calculated on an Actual / 360 annual basis and the various sections of the book still apply.