CRM2: PERFORMANCE CALCULATION METHODS

As part of the Client Relationship Management Phase 2 (CRM2) proposal, the regulators have put forward the use of money-weighted return (MWR) as opposed to the more frequently used time-weighted return (TWR) on the required performance report.

HOW IS IT DIFFERENT?

TWR was designed to measure the performance of investment decisions made by portfolio managers. It helps investors compare portfolio manager's performance. The impact of cash flows (whether they be deposits, withdrawals or transfers of assets) is removed from the calculation as the decision to add or remove money from the account is generally not considered an investment decision. MWR, on the other hand, looks at the whole account, which makes it a better tool to help investors track progress towards meeting financial goals. Croesus uses the most common method of calculating MWR, the Internal Rate of Return (IRR).

With IRR, all contributions and withdrawals are set up as a series of cash flows. Croesus then adds an inflow for the initial value of the account and an ouflow for the end value of the account. At this point, Croesus solves for the discount rate that makes the inflows balance with the outflows. Note that IRR cannot always be calculated, for example for an account that received an inflow of money and yet now has a negative net value due to leverage.

Example: All accounts are invested in the same security but the timing of the cash flows differs. This investment yielded a 0% return during the first half of the year and a 50% return in the second half, so the investment decision performance was the same. However, the deposit to account B just before the upswing contributes to the money-weighted performance and the withdrawal in account C detracts from it. While the investment performance (TWR) is the same, the performance of each account (MWR), when taken as a whole, is different.

	Account A	Account B	Account C
2016/01/01	Deposit: $1,000	Deposit: $100	Deposit: $1,000
2016/06/30		Deposit: $900	Withdrawal: $500
New balance:	$1,000	$1,000	$500
2016/12/31	End value: $1,500	End value: $1,500	End value: $750
MWR	50%	105.6%	32.7%
TWR	50%	50%	50%

Account B has a much higher return because much of the return was actually made over a six-month period rather than the one-year period:

$100 \times (1 + 105.6\%)^{365/365} + 900 \times (1 + 105.6\%)^{184/365} = 1{,}500.$

This effect is sometimes referred to as the "reinvestment assumption".