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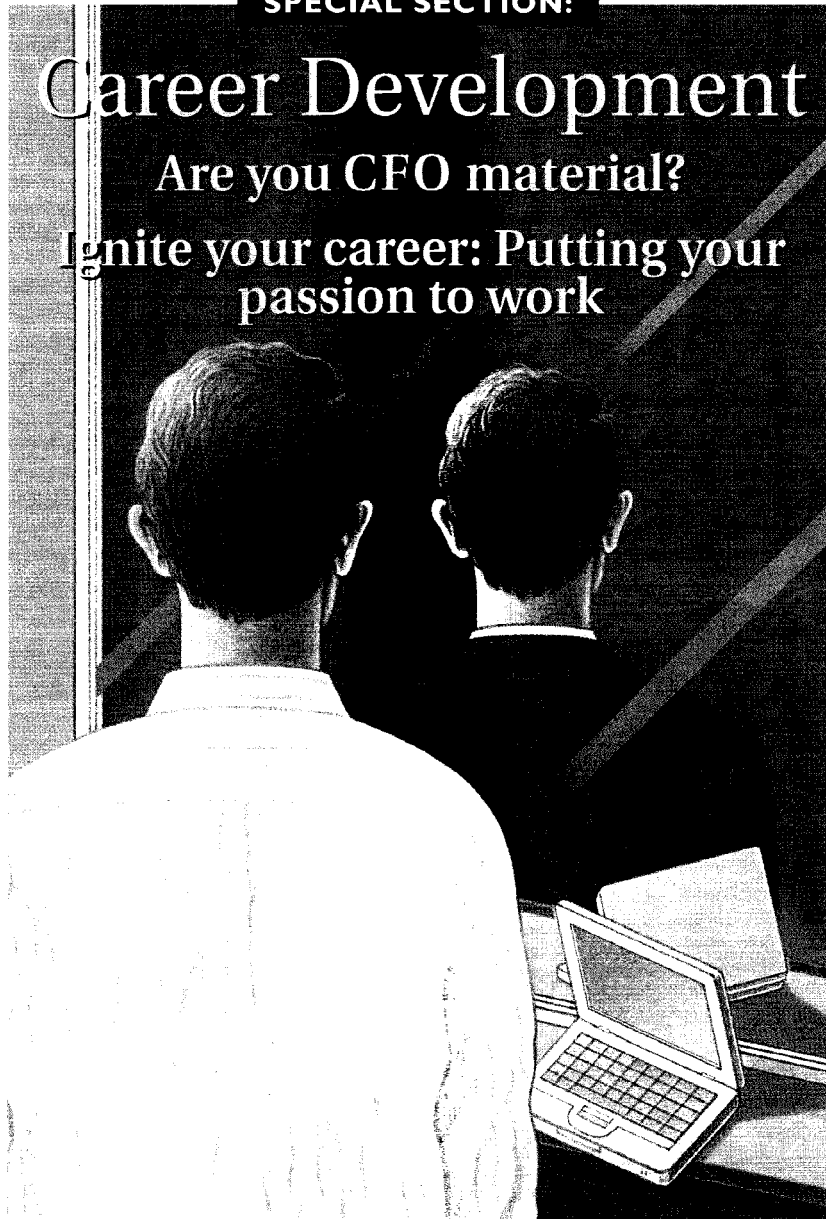
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SPECIAL SECTION:

Career Development

Are you CFO material?

Ignite your career: Putting your
passion to work



FEATURES

The wonderful world of repos

Paying e-bills

Risking all for STP

The wonderful world of repos

For cash managers, repos provide a useful alternative to short-term market instruments.

By Ana Sainz

A repo is an agreement to sell collateral for cash and buy the same collateral back at a set price, at a specific date in the future. In its simplest form, it is a means of secured borrowing, with the financing charge set by a trading desk rather than the commercial banker.

The repurchase market started as a way for investment-dealer trading desks to finance their long inventory of bonds and to borrow in (cover) bonds they had sold short. Originally started in the U.S. for U.S. treasury bonds, a healthy repo market now exists in both Canada and Europe. There are three basic types of financing agreements:

- the U.S. style or classic repo;
- sell/buy-back agreement, and
- securities lending.

For simplicity we will refer to all of them as repos. All three of these financing agreements may be used as part of a cash-management plan, as an alternative to investing in short-term market instruments such as Bankers' Acceptances, Treasury Bills or commercial paper.

Cash lent in a repo is fully collateralized, and risk is minimal, since the collateral is delivered against payment. In fact, in a classic repo, the cash lender is over-collateralized. The margin in Canada is generally 0%-2% of every dollar. The over-collateralization protects the lender from day-to-day price fluctuations in the marketplace.

Repo products offer the corporate treasurer flexibility in respect of:

- size of transaction (odd amounts of cash welcomed);
- period of transaction outstanding

(although in Canada it must be less than 364 days in total to fall under standardized legal documents), and

- combination of currency of collateral and cash used.

If the corporation already holds securities as a market investment repos can offer:

- incremental income above the coupon on the bonds;
- immediate access to cash without having to liquidate holdings over a cash crunch;
- potentially less expensive and/or alternative sources of funding, and
- with a mixed currency repo, access to short-term cash in other currencies while using C\$-denominated bonds as collateral.

Since legal title of the bonds transfers for the term of the repo, it is wise to review any outstanding debt covenants to ensure the corporation stays above-board with its lenders. Such short-term transactions are typically carved out under negative pledge covenants. Although legal title changes hands, the seller through the repo transaction retains certain attributes of the collateral:

- Any change in the market value of the collateral is attributed back to the seller, since the seller buys back the

bond at a pre-determined price.

- Economic benefit from the accrued interest (coupon interest) is attributed to the seller. Either the buyer (lender of cash) can reduce the financing cost by the carry of the underlying bond so that the seller pays a net amount, or the buyer can forward the coupon payment to the seller and request a repricing of the collateral.
- Default risk on the bond is also attributed to the seller. Under an Investment Dealers Association (IDA) agreement the repo seller must replenish the collateral for the buyer. The new collateral need not be the same but must be of appropriate credit quality.

Repos are also classified as general collateral (G.C.) or non-specific collateral. G.C. repos use any type of collateral as long as they are of a suitable credit rating. The seller uses the collat-

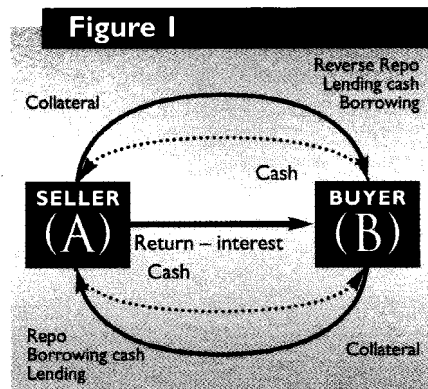


Table 1

	Classic Repo	Sell-Buy back agreement	Securities Lending
Transaction	One – sale and repurchase simultaneously		One – lending of securities against cash or a letter of credit
Relationship	Spot (sell) and forward (buy back)		Continuous
Pricing	Rate quoted as repo financing (interest) rate.	Rate quoted as repo financing (interest) rate.	Borrowing fee is paid at end of transaction.
Accrued Interest	Accrued interest is included in the price quoted (all-in price).	Accrued interest is shown separately in pricing (clean price plus accrued interest).	Flexibility in pricing through margin
Substitution	Available	Available	Available
Coupon interest	Seller retains interest		Seller retains interest

eral as a means to offset the buyer's own corporate credit risk. In addition, the repo seller may with the buyer's consent at onset of transaction substitute the collateral with bonds of equal or better credit quality.

Special repos are different. They come with a higher financing rate for the borrower because the underlying collateral (bonds) is in great demand by institutional investors.

Repo rates (the financing charge) are determined by the trading desk in close association with other money-market rates for high-quality market

instruments. Repo rates for each transaction will also be affected by the size and length of repo: the credit quality of the counterparties involved, and their collateral.

To pursue repo transactions, a corporation needs the following:

1. A signed repo agreement with the investment dealer(s) of your choice: In 1991, the IDA standardized repo agreements into a 2-page document that is relatively easy to understand. This agreement covers re-pricing availability, margin maintenance provision, and rights in event of default.

2. Properly set up and authorized trading account(s) with the investment dealers: This will include corporate resolutions to engage in such trading, authorizations identifying the person in the corporation who can issue instructions, banking instructions, etc. As this is an account with the institutional trading desk, retail brokers will not be able to offer this product directly.

3. Established credit lines for repo: This means either sending in financial statements to the investment dealer so that it can get credit lines approved or reviewing credit lines with existing lenders and their trading desks to ensure repos are covered.

Table 2 shows examples of the three types of repo using the same underlying collateral of C\$100 million of the current 10-year Canada bond 5.25% June 2013 priced at \$103.45 and the accrued factor of 2.1432 and repo rate of 2.70% (a). For the securities lending, let us assume a 25-basis-point fee quoted and the bonds being delivered 105% priced at \$102.11. Figure 1 outlines a typical repo transaction.

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Table 2**Numeric example of classic repo and sell-buy-back agreements:**

Start proceeds	= Par amount X (market price plus accrued)	= 100 million X (1.0345 + 0.21432)	= \$124,882,000.00
Repo interest	= Start proceeds X Repo rate X term / day basis	= 124,882,000 X .0270 X 30/365	= \$ 277,135.40
End proceeds	= Start proceeds + repo interest		= \$125,159,135.40
Start proceeds	= Par amount X (market price plus accrued)	= 100 million X (1.0345 + 0.21432)	\$124,882,000.00
Interest	= Start proceeds X Repo rate X term / day basis	= 124,882,000 X .0270 X 31/365	= \$ 286,373.24
End proceeds	= Start proceeds + interest		= \$125,168,373.24
Accrued interest	= Par amount X coupon X days from last coupon payment to end of trade	= 100 million X .0525 X (June 1 - Nov 24)/365	= \$ 2,531,506.85
End Price	= (End proceeds - accrued interest to end of trade) / par value of bond	= 125,159,135.40 - 286,373.24 - 2,531,506.85	= \$ 122.35

Numeric example of securities lending repo:

Value of bonds being borrowed	= Par amount X price	= 100 million X 103.45	= \$103,450,000.00
Amount of collateral being delivered	= Par amount X price X margin/price of collateral being provided	= 100 million X 103.45 /105% / 102.11	= \$106,377,925.77
Fee	Value of bonds being borrowed X basis points quoted X term/365	= 103,450,000 X 25 bps X 31/365	= \$ 21,965.41

(a) Rates used in example as of October 23, 2003