3. Held to Maturity Securities

It was noted earlier that certain types of financial instruments have a fixed maturity date; the most typical of such instruments are “bonds.” The held to maturity securities are to be accounted for by the amortized cost method.

To elaborate, if you or I wish to borrow money we would typically approach a bank or other lender and they would likely be able to accommodate our request. But, a corporate giant’s credit needs may exceed the lending capacity of any single bank or lender. Therefore, the large corporate borrower may instead issue “bonds,” thereby splitting a large loan into many small units. For example, a bond issuer may borrow $500,000,000 by issuing 500,000 individual bonds with a face amount of $1,000 each (500,000 X $1,000 = $500,000,000). If you or I wished to loan some money to that corporate giant, we could do so by simply buying (“investing in”) one or more of their bonds.

The specifics of bonds will be covered in much greater detail in a subsequent chapter, where we will look at a full range of issues from the perspective of the issuer (i.e., borrower). However, for now we are only going to consider bonds from the investor perspective. You need to understand just a few basics: (1) each bond will have an associated “face value” (e.g., $1,000) that corresponds to the amount of principal to be paid at maturity, (2) each bond will have a contract or stated interest rate (e.g., 5% -- meaning that the bond pays interest each year equal to 5% of the face amount), and (3) each bond will have a term (e.g., 10 years -- meaning the bonds mature 10 years from the designated issue date). In other words, a $1,000, 5%, 10-year bond would pay $50 per year for 10 years (as interest), and then pay $1,000 at the stated maturity date 10 years after the original date of the bond.

3.1 The Issue Price

How much would you pay for the above 5%, 10-year bond: Exactly $1,000, more than $1,000, or less than $1,000? The answer to this question depends on many factors, including the credit-worthiness of the issuer, the remaining time to maturity, and the overall market conditions. If the “going rate” of interest for other bonds was 8%, you would likely avoid this 5% bond (or, only buy it if it were issued at a deep discount). On the other hand, the 5% rate might look pretty good if the “going rate” was 3% for other similar bonds (in which case you might actually pay a premium to get the bond). So, bonds might have an issue price that is at their face value (also known as “par”), or above (at a premium) or below (at a discount) face. The price of a bond is typically stated as percentage of face; for example 103 would mean 103% of face, or $1,030. The specific calculations that are used to determine the price one would pay for a particular bond are revealed in a subsequent chapter.

3.2 Recording the Initial Investments

An Investment in Bonds account (at the purchase price plus brokerage fees and other incidental acquisition costs) is established at the time of purchase. Importantly, premiums and discounts are not recorded in separate accounts:

3.3 Illustration of Bonds Purchased at Par

1-1-X3	Investment in Bonds		5,000	
	Cash			5,000
	To record the purchase of five $1,000, 5%, 3-year bonds at par -- interest payable semiannually			

The above entry reflects a bond purchase as described, while the following entry reflects the correct accounting for the receipt of the first interest payment after 6 months.

6-30-X3	Cash		125	
	Interest Income			125
	To record the receipt of an interest payment ($5,000 par X .05 interest X 6/12 months)			

Now, the entry that is recorded on June 30 would be repeated with each subsequent interest payment -- continuing through the final interest payment on December 31, 20X5. In addition, at maturity, when the bond principal is repaid, the investor would make this final accounting entry:

12-31-X5	Cash		5,000	
	Investment in Bonds			5,000
	To record the redemption of bond investment at maturity			

3.4 Illustration of Bonds Purchased at a Premium

When bonds are purchased at a premium, the investor pays more than the face value up front. However, the bond's maturity value is unchanged; thus, the amount due at maturity is less than the initial issue price! This may seem unfair, but consider that the investor is likely generating higher annual interest receipts than on other available bonds -- that is why the premium was paid to begin with. So, it all sort of comes out even in the end. Assume the same facts as for the above bond illustration, but this time imagine that the market rate of interest was something less than 5%. Now, the 5% bonds would be very attractive, and entice investors to pay a premium:

1-1-X3	Investment in Bonds		5,300	
	Cash			5,300
	To record the purchase of five $1,000, 5%, 3-year bonds at 106 -- interest payable semiannually			

The above entry assumes the investor paid 106% of par ($5,000 X 106% = $5,300). However, remember that only $5,000 will be repaid at maturity. Thus, the investor will be "out" $300 over the life of the bond. Thus, accrual accounting dictates that this $300 "cost" be amortized ("recognized over the life of the bond") as a reduction of the interest income:.

6-30-X3	Cash		125	
	Interest Income			75
	Investment in Bonds			50
	To record the receipt of an interest payment ($5,000 par X .05 interest X 6/12 months = $125; $300 premium X 6 months/36 months = $50 amortization)			

The preceding entry is undoubtedly one of the more confusing entries in accounting, and bears additional explanation. Even though $125 was received, only $75 is being recorded as interest income. The other $50 is treated as a return of the initial investment; it corresponds to the premium amortization ($300 premium allocated evenly over the life of the bond -- $300 X (6 months/36 months)) and is credited against the Investment in Bonds account. This process of premium amortization (and the above entry) would be repeated with each interest payment date. Therefore, after three years, the Investment in Bonds account would be reduced to $5,000 ($5,300 - ($50

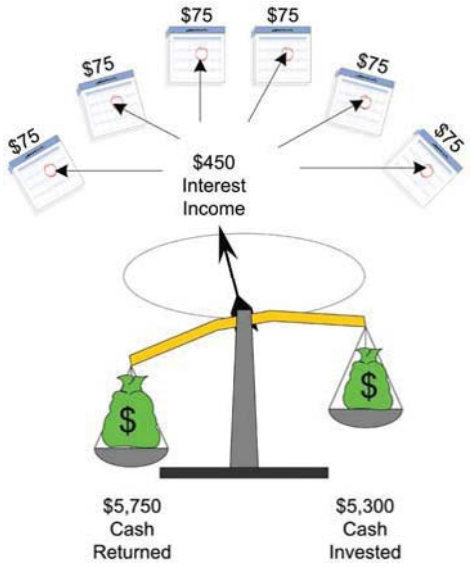
amortization X 6 semiannual interest recordings)). This method of tracking amortized cost is called the straight-line method. There is another conceptually superior approach to amortization, called the effective-interest method, that will be revealed in later chapters. However, it is a bit more complex and the straight-line method presented here is acceptable so long as its results are not materially different than would result under the effective-interest method.

In addition, at maturity, when the bond principal is repaid, the investor would make this final accounting entry:

12-31-X5	Cash		5,000	
	Investment in Bonds			5,000
	To record the redemption of bond investment at maturity			

In an attempt to make sense of the above, perhaps it is helpful to reflect on just the “cash out” and the “cash in.” How much cash did the investor pay out? It was $5,300; the amount of the initial investment. How much cash did the investor get back? It was $5,750; $125 every 6 months for 3 years and $5,000 at maturity. What is the difference? It is $450 ($5,750 - $5,300) -- which is equal to the income recognized above ($75 every 6 months, for 3 years). At its very essence, accounting measures the change in money as income. Bond accounting is no exception, although it is sometimes illusive to see. The following “amortization” table reveals certain facts about the bond investment accounting, and is worth studying to be sure you understand each amount in the table. Be sure to “tie” the amounts in the table to the entries above:

	Date	Cash Received		Interest Income		Premium Amortization		Investment in Bonds
3	1-1-X3	$ (5,300)	cr					$ 5,300
4	6-30-X3	125	dr	$ 75	cr	$ 50	cr	5,250
5	12-31-X3	125	dr	75	cr	50	cr	5,200
6	6-30-X4	125	dr	75	cr	50	cr	5,150
7	12-31-X4	125	dr	75	cr	50	cr	5,100
8	6-30-X5	125	dr	75	cr	50	cr	5,050
9	12-31-X5	125	dr	75	cr	50	cr	5,000
10	12-31-X5	5,000	dr	-		-		-
11		$ 450		$ 450		$ 300		



Sometimes, complex topics like this are easier to understand when you think about the balance sheet impact of a transaction. For example, on 12-31-X4, Cash is increased $125, but the Investment in Bond account is decreased by $50 (dropping from $5,150 to $5,100). Thus, total assets increased by a net of $75. The balance sheet remains in balance because the corresponding $75 of interest income causes a corresponding increase in retained earnings.

3.5 Illustration of Bonds Purchased at a Discount

The discount scenario is very similar to the premium scenario, but "in reverse." When bonds are purchased at a discount, the investor pays less than the face value up front. However, the bond's maturity value is unchanged; thus, the amount due at maturity is more than the initial issue price! This may seem like a bargain, but consider that the investor is likely getting lower annual interest receipts than is available on other bonds -- that is why the discount existed in the first place. Assume the same facts as for the previous bond illustration, except imagine that the market rate of interest was something more than 5%. Now, the 5% bonds would not be very attractive, and investors would only be willing to buy them at a discount:

1-1-X3	Investment in Bonds		4,850	
	Cash			4,850
	To record the purchase of five $1,000, 5%, 3-year bonds at 97 -- interest payable semiannually			

The above entry assumes the investor paid 97% of par ($5,000 X 97% = $4,850). However, remember that a full $5,000 will be repaid at maturity. Thus, the investor will get an additional $150 over the life of the bond. Accrual accounting dictates that this $150 "benefit" be recognized over the life of the bond as an increase in interest income:

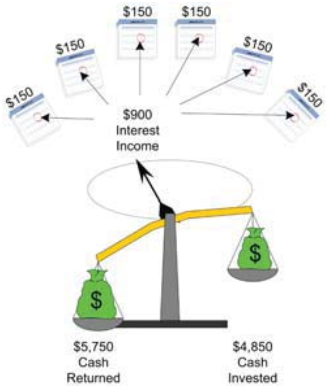
6-30-X3	Cash		125	
	Investment in Bonds		25	
	Interest Income			150
	To record the receipt of an interest payment ($5,000 par X .05 interest X 6/12 months = $125; $150 discount X 6 months/36 months = $25 amortization)			

The preceding entry would be repeated at each interest payment date. Again, further explanation may prove helpful. In addition to the $125 received, another $25 of interest income is recorded. The other $25 is added to the Investment in Bonds account; as it corresponds to the discount amortization ($150 discount allocated evenly over the life of the bond -- $150 X (6 months/36 months)). This process of discount amortization would be repeated with each interest payment. Therefore, after three years, the Investment in Bonds account would be increased to $5,000 ($4,850 + ($25 amortization X 6 semiannual interest recordings)). This is another example of the straight-line method of amortization since the amount of interest is the same each period.

When the bond principal is repaid at maturity, the investor would also make this final accounting entry:

12-31-X5	Cash		5,000	
	Investment in Bonds			5,000
	To record the redemption of bond investment at maturity			

Let's consider the "cash out" and the "cash in." How much cash did the investor pay out? It was $4,850; the amount of the initial investment. How much cash did the investor get back? It is the same as it was in the preceding illustration -- $5,750; $125 every 6 months for 3 years and $5,000 at maturity. What is the difference? It is $900 ($5,750 - $4,850) -- which is equal to the income recognized above ($150 every 6 months, for 3 years). Be sure to "tie" the amounts in the following amortization table to the related entries.



	Date	Cash Received		Interest Income		Discount Amortization		Investment in Bonds
3	1-1-X3	$ (4,850)	cr					$ 4,850
4	6-30-X3	125	dr	$ 150	cr	$ 25	dr	4,875
5	12-31-X3	125	dr	150	cr	$ 25	dr	4,900
6	6-30-X4	125	dr	150	cr	$ 25	dr	4,925
7	12-31-X4	125	dr	150	cr	$ 25	dr	4,950
8	6-30-X5	125	dr	150	cr	$ 25	dr	4,975
9	12-31-X5	125	dr	150	cr	$ 25	dr	5,000
10	12-31-X5	5,000	dr	-		-		-
11		$ 900		$ 900		$ 150		

Can you picture the balance sheet impact on 6-30-X5? Cash increased by $125, and the Investment in Bond account increased $25. Thus, total assets increased by $150. The balance sheet remains in balance because the corresponding $150 of interest income causes a corresponding increase in retained earnings.