

.....CPS BULLETIN.....

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Introduction

This issue of **CPS Bulletin** begins with the conclusion of our article about assets. The first part appeared in our April 2002 bulletin. This issue's article describes some of the advantages fraternal have with regard to investing in bonds, and compares the yields on corporate bonds with treasuries.

Our second article outlines three important areas that all computer users should be aware of: backup, virus protection and firewalls. If you would like our recommendations as to which software on the market would be best at handling these items on your computers, please let us know.

We have also provided an update on recent state and NAIC activity, including the NAIC's current position with regard to the 2001 CSO mortality table. If they take much longer to adopt the new table, it may have to have its name changed to the 2003 Table!

We hope that you enjoy receiving this newsletter. If you have any comments or suggestions on how we can improve **CPS Bulletin**, please contact us by visiting our company web site at www.cpsincorp.com ❖

Asset/Liability Matching

In Part One of this article (which appeared in our April 2002 issue) we discussed the concept of Investment Risk and defined it to be the likelihood of failing to meet one's liabilities. We showed that for a Fraternal Benefit Society, the optimum way to determine the liability outgo is through a cash flow projection and that the nature of the obligations makes bonds a natural investment avenue. Furthermore, we discussed methods to minimize the investment risk by matching assets to liabilities or immunizing surplus against movement in interest rates.

In this article we shall look at the selection of investments, in order to maximize the return on the portfolio.

An important basic consideration is that fraternal are tax-exempt organizations as opposed to most other market participants who are taxed on either income or capital gains or both. For example, a bond may be priced by the market to include an average tax-rate of 15% on income and 10% on capital gains. Accordingly, a fraternal, which is tax-exempt, will have an advantage in acquiring this asset. Hence:

- Fraternal would ordinarily prefer high coupon bonds.
- Fraternal will have an advantage in the corporate bond market. This is because there are a number of investors in the bond market for whom treasury and municipal bonds are tax-exempt; there are, however, fewer investors like fraternal that are exempt from the tax on corporate bonds.

As may be seen from the chart below (based on data provided courtesy of Solomon Smith Barney), over the last couple of years there has been an average differential (spread) between yields on high-grade, longer-term corporates and comparable treasuries.

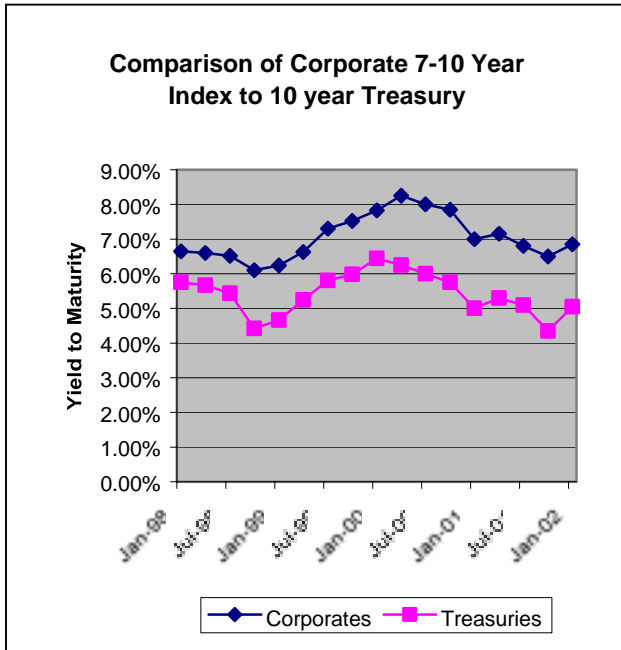
See **Assets** on page 2

INSIDE THIS ISSUE

- 1 Introduction
- 1 Asset/Liability Matching
- 3 Protecting Your Computer
- 4 Regulatory Update
- 4 Interest Rate Monitor
- 4 About CPS

Assets, continued from page 1

The spread has been about 1¾% (currently 2%). This means that on average if the 10-year treasury note is paying 5%, then the corporate bond may be expected to yield about 6¾%. This differential is due to (a) tax aspects, (b) security of capital considerations and (c) the interest rate call premium.



This interest rate call premium arises because corporate bonds are much more likely to be called than treasuries. This presents an option against the investor when interest rates drop steeply and the issuer is able to raise new funds at lower interest rates.

Another alternative to treasuries are mortgages, such as GNMA's, which have shown over the same period an average spread of about 1½% (currently 1¼%) over 10-year treasuries. By comparison, the spread for bonds of agencies such as FNMA averaged only ¾% (currently ½%) above the treasury rates.

The yield on preferred stocks is comparable with the yields on 30-year corporate bonds. Preferreds have a yield that is approximately 2% higher than 30-year treasuries. Since a fraternal is indifferent (tax-wise) as to whether the income emanates from bonds or preferred stocks, it should investigate the income security aspects before making a decision. All other things being equal, bonds are preferable, since the society will have to set up a lower Asset Valuation Reserve (AVR) for them.

Although societies would not normally wish to invest in high yield bonds (also commonly called Junk bonds) these bonds have a spread of about 6% (currently 7¾%), on average, compared with 10-year treasuries. Junk bonds have outperformed, over longer time periods, conservative bonds overall, even given the inevitable losses of income and capital for some of these bonds.

An alternative method of investment in bonds is via a bond mutual fund. Some bond funds are currently yielding as much as 8-9%, which is quite high considering today's interest rate environment. These funds are classified as common stocks in the annual statement and hence have a higher AVR requirement.

In Part One of this article, we determined that a fixed interest portfolio should match or immunize the liabilities. What about unassigned funds?

For a society where income equals or exceeds outgo, surplus is a margin that it uses to cushion adverse experience. Over longer periods of time, one would expect fluctuations to even out and the surplus to remain intact. Surplus is thus a part of the society's assets that is to be passed from generation to generation and should not be considered the property of any one group of a society. Surplus assets therefore have the longest term of all and should be grown for future generations of members. It could hence be argued that a matched position for surplus should be investments in real estate (not mortgages), and common stock investments.

One final word about matching. This principle is also paramount in currency matching. Some fraternal have many more Canadian assets than Canadian liabilities. In these circumstances, should the value of the Canadian dollar decrease against the US dollar, societies who have "excess" assets denominated in Canadian dollars would see currency losses. If the movement were to reverse, then the society would make a currency gain. In order to avoid wild swings in surplus due to changes in the value of the Canadian dollar, fraternal with Canadian business should aim to match their currency exposure.

In conclusion, societies should strive to match or immunize their investments against adverse interest rate movements and be aware of the risks of trying to time the market in order to achieve a better interest rate return. ❖

Protecting Your Computer:

Following past articles in **CPS Bulletin**, we have dedicated this quarter's computer article to discuss three important areas: Backup, Virus Protection and Firewalls.

Backup

It is essential for any user to ensure that should vital files be erased or corrupted, there is a means to reestablish them. It has been found in practice that this is one of those tasks that users tend to neglect or perform sporadically. Consequently the best backup methods are those that do this task automatically and regularly.

In a business environment, the easiest way to perform backups is to establish a network for all or a group of computers in the office and then regularly back up the network. A network can pay for itself through additional benefits such as sharing of hardware (e.g. all users on a network can use the same printer as opposed to each having their own printer).

At home, backup has become easier since many computers now have CD R/W drives. CDs have large capacities and by strategically arranging one's files in one or two directories it is easy to quickly copy them to the CD drive every week. Zip drives can also be used to backup a computer, but it has lower capacity (maximum-250 Megabytes) than a CD (750 Megabytes). DVD Drives, which will be more commonplace shortly, are likely to have as much as 4,000 Megabytes of capacity!

These methods are for backing up data such as word-processing files, photos, music files, etc. Applications (such as .exe files) do not back-up as well and it is important to keep the original installation CD (or diskette) available for that purpose

Virus Protection

Most users know that the principal infection methods are through e-mail attachments or through shared diskettes and that abstinence from opening unknown attachments is the safest method of avoiding STDs (Software Transmitted Diseases). One can also get protection from STDs by using anti-virus software.

The new generation of browsers (the programs you use to browse the Internet), such as Internet Explorer 6 and Netscape 7, have more built-in security features

that allow you to set protective security tabs. For example, Outlook Express 6, a component of Internet Explorer 6, has a blocking feature (Tools-Options-Security) to prevent attachments that could be a virus from being saved or opened.

Specialized protective software is available from a variety of vendors. In an office environment it should be provided through the network and its suppliers (such as Computer Associates). In the personal area, McAfee and Symantec (Norton) are the best known and may be purchased for less than \$50. Purchasing this software allows the user to download updates from the Internet so that your anti-virus software can keep up-to-date with new viruses.

The key here, as for backup above, is regular updates of the software. New viruses appear continuously. The Symantec software currently checks for more than 61,000 viruses. Unless your software is updated regularly, you might as well not even have the software. Fortunately, it is now possible to sign up for automatic update of the virus files (while you sleep!).

Firewall

The objective of a firewall is to prevent unauthorized access to your computer. Hackers may wish to access your computer in order to:

- Launch attacks against a high profile web site. Once gaining control of your computer, the hacker can direct it, and hundreds or thousands of others, to attack simultaneously, thus overloading and effectively shutting down a popular site.
- Distribute software illegally. After appropriating space on your hard drive, the hacker may enable others to access your computer as a "warehouse" site to download pirated entertainment or business applications.

This problem is becoming increasingly important as people employ "always-on" connections such as DSL and Cable, which have a constant (computer) address. Conversely, each time one logs on using a modem connection, one is assigned a different address. The hacker finds it easier and more attractive to use you as a "host" for inappropriate activities when he knows your address precisely and is able to access it at will.

See **Protecting Your Computer** on page 4

A firewall, which may be software or hardware or a combination, can block unauthorized entry into your computer, as well as restrict outbound traffic.

In a business context, a network should automatically include firewall software and hardware. In the home, one can use a Hardware Router, which can serve up to 4 machines for under \$100. Its function is to mask your computer's ports and addresses to outsiders. In addition, firewall software is available from the virus protection vendors mentioned above as well as Zone Labs. Zone Labs have free shareware, which may be downloaded from their site (www.zonelabs.com) or a professional version, which costs less than \$50.

Conclusion

Protecting your computers both at home and in the office is something that all users must consider. Backing up your computer, checking it for viruses and protecting it so that outsiders do not have access to it are three important functions of computer maintenance. At CPS, we specialize in establishing computer networks and procedures for protecting your computers. Please feel free to contact us if you would like to discuss these items with us.

Interest Rate Monitor

The following are some key interest rate benchmarks:

Benchmark	Current	3 Months Ago	1 Year Ago
Fed Funds	1.75%	1.75%	4.00%
Prime Rate	4.75%	4.75%	7.00%
30 yr mortg	6.14%	6.74%	6.75%

Source: www.bloomberg.com as of June 24, 2002.

About CPS

CPS Actuaries and Computer Programming & Systems, Inc.

CPS is an independent company with over 35 years of service to our clients. We offer a wide range of computer and actuarial services. For information regarding our services, please call us at **203-324-9203**, or visit our web site at www.cpsincorp.com ❖

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Regulatory Update

Draft 2001 CSO Mortality Table: The Table is expected to receive final adoption at the NAIC's fall meeting. Since our last update it was noted that the Table might significantly understate the mortality of guaranteed issue policies. The relevant subcommittee did not wish to delay the implementation of the Table pending resolution of this and other relatively minor issues and agreed that more data from smaller insurers will, in the future, be required in order to study the experience of this segment of the business. Thus, insurers may be required to electronically save and retain the necessary information for annual submission. Companies with both (i) less than 50,000 policies and (ii) fewer than 100 death claims, will be exempt from this study. This appears to exempt some, but not all, fraternal from this burden.

Easing requirements for Term policies issued in New York:

Currently if an insurer wishes to issue in New York State term life policies with no non-forfeiture values, it must demonstrate that cash values at any point would be less than 2.5% of the face amount. There is a presumption that policies for a term of up to 20 years and expiring before age 71 have no cash value and require no demonstration. This safe harbor has now been enlarged to include policies for a term of up to 30 years and expiring before age 81.

Will the valuation interest rate change soon?

The maximum valuation interest rate for life insurance policies will remain at 4½% for 2003. If you are like us at **CPS**, you may have been wondering whether the current low interest rate environment may lead to a lower valuation rate any time soon. We applied the formula that is used to derive the valuation rate and found that if the Moody's Corporate Bond Index (MCBI), to which the rate is linked, were to average below 6.2% for a period of 12 months ending on a June 30, then the maximum valuation rate for life insurance would drop to 4%. The MCBI is now only available via paid subscription. For those that do not subscribe, the 10-year Treasury Note can be used as a proxy. Because of the spread mentioned in our Assets article above, a 4% valuation rate may become a reality if the 10-year Treasury Note falls to an average of less than 4¾% over the next 12 months.