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FIN 620: EXECUTING AND REPORTING FINANCIAL MARKET TRANSACTIONS

Financial Instruments

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INTRODUCTION

The financial market is describing a marketplace where buyers and sellers participate in the trade of assets such as equities, bonds, currencies and derivatives. Financial markets can be found in nearly every nation in the world. Some are very small, with only a few participants, while others - like the New York Stock Exchange (NYSE) and the forex markets - trade trillions of dollars daily.

The purpose of a financial market is to set prices for global trade, raise capital and transfer liquidity and risk. Although there are many components to a financial market, two of the most commonly used are **money markets** and **capital markets**.

The money market is a segment of the financial market in which financial instruments with high liquidity and very short maturities are traded, usually for assets up to one year. Conversely, capital markets are used for long-term assets, which are any asset with maturity greater than one year. Capital markets include the equity (stock) market and debt (bond) market.

Capital Markets

Capital markets are perhaps the most widely followed markets and is one in which individuals and institutions trade financial securities. Both the stock and bond markets are closely followed and their daily movements are analyzed for the general economic condition of the world markets. As a result, the institutions operating in capital markets, such as stock exchanges, commercial banks and all types of corporations, including nonbank institutions such as insurance companies and mortgage banks - are carefully tested.

The institutions operating in the capital markets access them to raise capital for long-term purposes, such as to expand a line of business or enter into a new business. Entities that are raising money for these long-term purposes come to one or more capital markets. In the bond market, companies may issue debt in the form of corporate bonds, while both local and federal governments may issue debt in the form of government bonds. Similarly, companies may decide to raise money by issuing equity on the stock market. Government entities are typically not publicly held and, therefore, do not usually issue equity. Companies and government entities that issue equity or debt are considered the sellers in these markets.

The buyers, or the investors, buy the stocks or bonds of the sellers and trade them. If the seller, or issuer, is placing the securities on the market for the first time, then the market is known as the primary market. Conversely, if the securities have already been issued and are now being traded among buyers, this is done on the secondary market.

The buyers of securities in the capital market tend to use funds that are targeted for longer-term investment. Capital markets are risky markets and are not usually used to invest short-term funds.

Money Markets

The money market is used by participants for borrowing and lending in the short term, from several days to just under a year. Money market securities include negotiable certificates of deposit (CDs), banker's acceptances, U.S. Treasury bills, commercial paper, municipal notes, euro-dollars, federal funds and repurchase agreements (repos).

The money market can be used from a company raising money by selling commercial paper into the market or from an investor purchasing CDs as a safe place to park money in the short term. The money market is typically seen as a safe place to put money due the highly liquid nature of the securities and short maturities. Because they are extremely conservative, money market securities offer significantly lower returns than most other securities. On the other hand, there are risks in the money market that an investor needs to think, such as the risk of default on securities, for example commercial paper.

Capital vs. Money Markets

There are both differences and similarities between capital and money markets. Both markets provide a necessary business function: maintaining adequate levels of funding. The goal for which sellers access each market varies depending on their liquidity needs and time horizon. Similarly, investors or buyers have unique reasons for going to each market and few things to consider before their decision.

To begin with, the money market deals in the lending and borrowing of short-term finance, while the capital market deals in the lending and borrowing of long-term finance. The main credit instruments of the money market are call money, collateral loans, acceptances, bills of exchange. On the other hand, the main instruments used in the capital market are stocks, shares, debentures, bonds, securities of the government.

The money market meets the short-term credit needs of business; it provides working capital to the industrialists. The capital market, on the other hand, caters the long-term credit needs of the industrialists and provides fixed capital to buy land, machinery, etc. The degree of risk is small in the money market. The risk is much greater in capital market. The maturity of one year or less gives little time for a default to occur, so the risk is minimized. Risk varies both in degree and nature throughout the capital market.

The basic role of money market is that of liquidity adjustment. The basic role of capital market is that of putting capital to work, preferably to long-term, secure and productive employment.

The money market is closely and directly linked with central bank of the country. The capital market feels central bank's influence, but mainly indirectly and through the money market. Finally, in the money market, commercial banks are closely regulated. In the capital market, the institutions are not much regulated.

Comparing the Money Market Instruments

According to the authors of *Financial Management: Theory and Practice,* Brigham and Ehrhardt state that financial securities are presented as just a paper form with contractual provisions, which make eligible to their owners to clarify rights and claims on related cash flows or values. Debt instruments usually indicate exact payments and maturity. It is a money market security if the debt matures within one year. The money markets instruments come in a variety of forms. Some are discounted and some are interest-bearing, and some are negotiable securities and some are not. Some are actual physical security when others exist only in book-entry form. In almost all cases, denominations are large. The money market can be said as a wholesale market. Money market instruments pay interest in two ways.

First one is interest-bearing. Interest-bearing instruments pay interests at maturity and another one, discounted instruments are sold at discount.

Discounted Instruments and Interest-bearing Instruments - Discounted instruments neither specify rated interest nor make specified interest payments. Discounted instruments yield a return because they are issued or sold at less than face value, but they can be redeemed for full face value at maturity. Although this change in value may seem more like a capital gain than interest, accountants and taxing authorities have agreed that discounts are in efficient interest. The quote given for a discounted instrument is the discount rate that is percentage of face value that must be subtracted from the face value to determine the price. Interest-bearing instruments are typically issued at face value and pay at a specified rate of interest on specific dates during the life of the instrument. US bonds for example, typically pay interest semi-annually. Interest-bearing money market instruments such as certificates of deposit (CD) typically pay all their interest at maturity even if that maturity is greater than six months. The quote given for an interest-bearing money market instrument is typically this simple interest rate.

Negotiable/Non-negotiable Instruments - A negotiable instrument is an instrument that can be sold by one investor to another. A non-negotiable instrument must be held by the original investor to maturity.

Treasury bill - A Treasury bill is a non interest-bearing securities sold at a discount to face value. It is issued by the US Treasury in maturities with three-month, six-month, and one-year period and is backed by the full faith and credit of the US government. Moreover, interest is exempt from state and local taxes. Although Treasury bills were once issued as physical certificates, they are currently issued only in book-entry form. Over the years, congress has set up a number of federal agencies, created to help provide credit to certain sectors of the economy. The Government National Mortgage Association for example, established to attract funds to the home mortgage market. Other agencies include the banks for cooperatives and the Federal Home Loan Banks. Although most of the securities these agencies issue are longer-term notes and bonds, they also issue short-term discount notes, similar to Treasury bills.

Securities - State and local governments actually issue two forms of securities. The first is a traditional short-term note, which is issued in anticipation of receiving some form revenue. These notes carry names like tax anticipation note or bond anticipation note. Most of these are interest-bearing notes, but some are issued in discounted form. Other important form is called variable rate demand bond or VRDB. These bonds are actually long-term bonds issued for capital raising purposes, but they carry a variable rate that may be reset as often as daily, and most significantly, they carry a feature that allows the holder to put the bond back to the issuers on the reset date.

Bankers Acceptance - Banker's acceptance (BA) is basically a special form of time draft that is a check payable on a specific date rather than demand. More specifically, it is a time draft that has been accepted or guaranteed by a bank. B.A.s are usually created to help finance international trade transactions between parties that do not know each other. They are negotiable instruments and are sold at a discount. There are a certificate of deposit (CD), international and Eurodollar deposit, Fed funds purchase, repurchase agreement, and so on. A table below is a summary of each instrument explained above.

Commercial Paper- In this project, we have collected six-month data of commercial paper to examine how this specific instrument has behaved. Commercial paper is a short-term negotiable promissory note issued by a corporation and most commercial paper is discounted, but some are interest-bearing. Maturities of commercial paper vary from 1 day to 270 days, with an average of about five months. And its interest rate fluctuates with supply and demand condition that is changed day-by-day basis in the marketplace (Brigham and Ehrhardt.) A chart below shows commercial paper outstanding on December 5, 2013.

	Discounted (D) or Interest-Bearing (I)	Negotiable? (Yes / No)	Tax Exempt? (Yes / No)
US Treasury bill	D	Y	Y
Municipal note	I	Y	Y
Commercial paper	D	Y	N
Bankers acceptance (BA)	D	Y	N
Certificate of deposit (CD)	I	Y	N
Eurodollar deposit	I	N	N
Fed funds purchase	I	N	N
Repurchase agreement (repos)	I	N	N

On December 5, 2013, outstanding is at a current level of 1.050T, and this is down from 1.059T previous week and up from 1.026T in 2012. This shows a difference of -0.89% from end of November and 2.36% from one year ago. An interest rate is usually tied to the prime rate/ the London Interbank Offered Rate (LIBOR.) Commercial paper rates are provided for the AA nonfinancial, A2/P2 nonfinancial, AA financial, and AA asset-backed on daily basis and annual and monthly average interest rates are shown following table extracted from federalreserve.gov.

Period	AA nonfinancial						A2/P2 nonfinancial					
	1-day	7-day	15-day	30-day	60-day	90-day	1-day	7-day	15-day	30-day	60-day	90-day
Annual average												
2011	0.09	0.09	0.11	0.12	0.15	0.17	0.31	0.34	0.35	0.37	0.41	0.46
2012	0.11	0.12	0.12	0.13	0.15	0.19	0.38	0.41	0.42	0.46	0.50	0.53
2013*	0.06	0.07	0.07	0.08	0.09	0.12	0.26	0.27	0.27	0.30	0.33	0.34
Monthly average												
2013-July	0.05	0.06	0.06	0.06	0.08	0.11	0.23	0.25	0.26	0.29	0.34	0.33
Aug.	0.04	0.05	0.05	0.05	0.07	0.09	0.21	0.23	0.24	0.26	0.29	0.33
Sept.	0.04	0.05	0.05	0.05	0.06	0.08	0.21	0.22	0.24	0.25	0.27	0.30
Oct.	0.06	0.07	0.07	0.07	0.09	0.11	0.24	0.25	0.26	0.29	0.30	0.31
Nov.	0.04	0.05	0.05	0.05	0.07	0.09	0.21	0.22	0.21	0.26	0.28	0.27
Dec.*	0.05	0.05	0.05	0.05	0.06	0.10	0.23	0.21	0.22	0.25	0.27	0.29

Period	AA financial						AA asset-backed					
	1-day	7-day	15-day	30-day	60-day	90-day	1-day	7-day	15-day	30-day	60-day	90-day
Annual average												
2011	0.08	0.09	0.10	0.13	0.17	0.21	0.30	0.37	0.35	0.27	0.27	0.29
2012	0.09	0.10	0.11	0.12	0.15	0.20	0.25	0.32	0.28	0.27	0.29	0.31
2013*	0.07	0.07	0.07	0.09	0.11	0.14	0.14	0.19	0.18	0.18	0.20	0.23
Monthly average												
2013-July	0.06	0.07	0.06	0.08	0.10	0.14	0.12	0.16	0.17	0.16	0.19	0.21
Aug.	0.06	0.06	0.06	0.07	0.09	0.12	0.11	0.15	0.15	0.16	0.19	0.22
Sept.	0.05	0.06	0.05	0.06	0.08	0.11	0.10	0.15	0.14	0.16	0.19	0.22
Oct.	0.06	0.06	0.06	0.09	0.12	0.12	0.12	0.15	0.16	0.16	0.18	0.21
Nov.	0.06	0.07	0.06	0.07	0.09	0.12	0.10	0.13	0.14	0.14	0.18	0.20
Dec.*	0.06	0.10	n.a.	0.08	0.10	0.14	0.11	0.13	0.15	0.14	0.17	0.21

To observe commercial paper in past six months, the prime rate should be presentable, so current prime rate are retrieved from bankrate.com and shown below table:

Prime rate, federal funds rate, COFI Updated 12/4/2013

	This week	Month ago	Year ago
WSJ Prime Rate	3.25	3.25	3.25
Federal Discount Rate	0.75	0.75	0.75
Fed Funds Rate (Current target rate 0-0.25)	0.25	0.25	0.25
11th District Cost of Funds	0.963	0.957	1.011

Prime rate from December 2012 to December 2013 is flat, 3.25%. Commercial paper rates in past six months have ranged from 2.91 to 3.21 percentages below the prime rate of 3.25%. As mentioned earlier, commercial paper is typically issued at a discount to a preset face value. This indicates that investors hold commercial paper at a price below the actual value, and take the face value at maturity. Subtracting the purchase price from the face value at maturity presents discount. This discount equals interest that received on commercial paper. Performance of commercial paper in past six months shows the range of interest/discount that investors received.

Capital Market Instruments

A bond market index measures the value of each section of the bond market. Financial managers use this tool to determine the characteristics of the market and to compute their return on investments. They encompass government bonds, municipal bonds, corporate bonds, high yield bonds etc. Bonds are classified based on their maturity or credit rating.

Barclays Capital U.S Aggregate Bond Index

It is a broad base indexed maintained by Barclays Capital. It was earlier called as the Lehman Aggregate Bond Index, which entered into bankruptcy under the control of Lehman Brothers. Barclays acquired parts of the Lehman Brothers in September 2008 for worth $ 1.35 billion. This buyout saved almost 9000 jobs. The Barclays U.S. Aggregate Bond Index is known under the symbol as AGG. The index measures the performance of the U.S investment grade bond market.

The Exchange Traded Funds that tracks the Barclays Capital U.S Aggregate Bond Index are

Symbol	Name	Price	Change	Assets	Avg. Vol	YTD
BND	Vanguard Total Bond Market ETF	$80.41	-0.21%	$17,405,952	1,167,867	-4.31%
AGG	iShares Core Total U.S Bond Market ETF	$106.67	-0.27%	$14,638,168	957,496	-3.97%
LAG	SPDR Lehman Aggregate Bond ETF	$56.49	-0.21%	$668,004	58,395	-3.88%
SCHZ	Schwab U.S. Aggregate Bond ETF	$50.52	-0.26%	$485,280	58,302	-3.44%

Assets in thousands of U.S dollars

AGG – Core Total U.S Bond Market ETF

Overview

Pricing Data	$ 106.67
Assets Class	Bond
Bond Type(s)	Total Bond Market
Bond Duration	All-Term
Previous Close	$ 106.96

Trading Data for AGG

Open	$106.61	Volume	609,025
Day Lo	$ 106.59	Day HI	$106.77

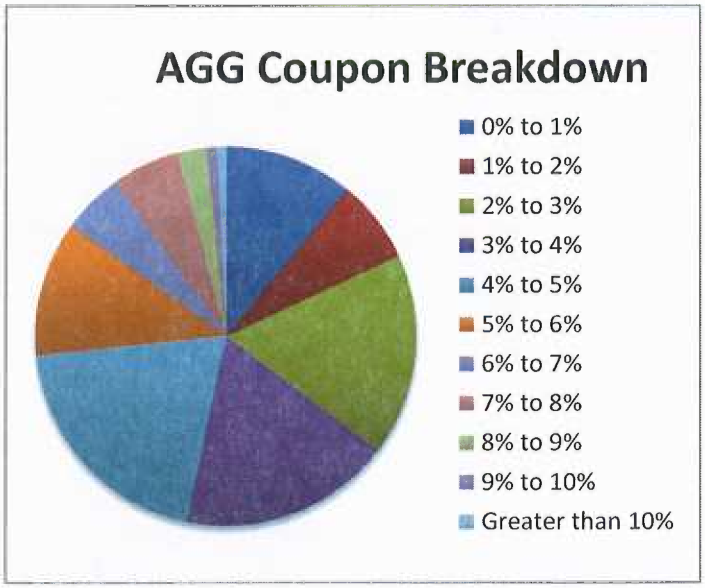
AGG – Top Ten Holdings

1. US Treasury Bond 7.5%: 2.24%
2. US Treasury Note 3.625%: 1.75%
3. US Treasury Note 1%: 1.52%
4. US Treasury Bond 8.125%: 1.42%
5. US Treasury Note 0.75%: 1.38%
6. US Treasury Bond 7.625%: 1.35%
7. US Treasury Bond 4.625%: 1.25%
8. US Treasury Note 2.375%: 1.08%
9. US Treasury Note 1.875%: 0.93%
10. Fannie Mae Single Family TBA 3% 2043-07-01: 0.85%

AGG Asset Allocation

Asset	Percentage
U.S Stocks	0.0%
International Stocks	0.0%
U.S. Bonds	81.53%
International Bonds	9.52%
Preferred Stock	0.01%
Convertibles	0.0%
Cash	8.94%
Other	0.0%

AGG Coupon Breakdown



Coupon Range	Percentage
0% to 1%	9.98%
1% to 2%	6.47%
2% to 3%	15.73%
3% to 4%	16.37%
4% to 5%	18.22%
5% to 6%	10.53%
6% to 7%	4.71%
7% to 8%	5.3%
8% to 9%	2.23%
9% to 10%	0.83%
Greater than 10%	0.69%

AGG Maturity Breakdown

Maturity	Percentage
Less than 1 year	0.0%
1-3 Years	15.65%
3-5 Years	18.33%
5-7 Years	7.19%
7-10 Years	8.81%
10-15 Years	4.43%
15-20 Years	3.62%
20-30 Years	28.83%
30+ Years	3.24%

One Year trend of AGG

Analysis of AGG

AGG had a positive trend in the first quarter and the first half of second quarter. There is a decrease in the performance of AGG in the subsequent quarters. The bond has issued dividends at a dividend yield of 2.28%. There are two things to consider before buying a bond. First, bond prices are inversely associated with interest rates. Second, corporate bonds pay a spread to treasury yield to compensate for their credit risk. For instance, if HYG has an effective duration of 4.07 it means that if interest rate increases by 1 percent the price of the ETF will fall by 4.07%.

Many large investors' funds are tied to AGG. The index popularity is having repercussions for how hundreds of billions of dollars are allocated to fixed income portfolios. Even the safest of bonds have scared the investors at times. The prime reason for AGG's changing fortunes is because U.S Treasury and government backed mortgage debt have gained larger share of index. Since 1976, AGG posted annualized return of 7.68%. Though AGG is smaller than S&P, this index has posted negative calendars only twice during its 37-year history. They were during the periods in 1994 and 1999.

This year drop in AGG indicates that investors are becoming braver in gambling in bonds. They are betting that gains in labor and housing markets will finally prompt rising rates in largest bonds. They also believe that the Fed will reduce its debt purchases. If that scenario comes into reality, it would punish all the debt investors and particularly those who bought the recently issued low-yielding high rated bonds. A higher rate means lower bond prices. Roughly around $4 trillion is invested into strategies of AGG. A data provider of institutional investment suggested that large investors have pulled $171 billion from securities that track indexes.

AGG's decline is still small relative to the double-digit percentage plunges that investors have experienced in bad years of stock market. If interest rates become higher bond investments linked to AGG could be hurt. If benchmark interest rates rise by one percentage point, AGG would lose 5.22% in price. When bond prices fall, yields rises. The impact could cause a big impact. The index comprises of 8,286 bonds worth nearly $17 trillion. Taking a note of the current situation Barclays has been developing customized indexes for clients and also rolled out new indexes to reflect changing investor demand.

CONCULUSION

If you feel you have a better understanding of your income and have a budget that covers your expenses, you have succeeded in taking control of your finances. But some people want to take the additional step of making their money work for them (earning money off of their money.) This can be a fun and rewarding process, but it can also be complicated and risky. Not all types of investments are guaranteed to make you money - sometimes you can lose the money you already have. An investment whose objective is to earn interest for shareholders but still maintain the Net Asset value (NAV) for one dollar per share. In this paper we have discussed about **capital vs money market** - Money market deals in the lending and borrowing of short-term finance, while the capital market deals in the lending and borrowing of long-term finance. **Treasury Bills** - It is issued by the US Treasury in maturities with three-month, six-month, and one-year period and is backed by the full faith and credit of the US government **Securities** - A financial instrument that represents an ownership position in a publicly-traded corporation a creditor relationship with governmental body or a corporation (bond). A security is a fungible, negotiable financial instrument that represents some type of financial value. **Banker acceptance**- Banker acceptances are usually created to help finance international trade transactions between parties that do not know each other. They are negotiable instruments and are sold at a discount. **Commercial paper and capital market instruments** - Commercial paper is not usually backed by any form of collateral, so only firms with high-quality debt ratings will easily find buyers without having to offer a substantial discount (higher cost) for the debt issue and Capital markets typically involve issuing instruments such as stocks and bonds for the medium-term and long-term. In this respect, capital markets are distinct from money markets, which refer to markets for financial instruments with maturities not exceeding one year.

Each of these aspects has their own negative and positive of it but Aside from being low risk and highly liquid, money market funds may be attractive to investors because they have no loads (fees that some mutual funds charge for entering or exiting the fund). Some money market funds also provide investors with tax-advantaged gains by investing in municipal securities that are tax-exempt at the federal and/or state level. A money-market fund might also hold short-term U.S. Treasury securities (T-bills), certificates of deposit and corporate commercial paper. A downside of money market funds is that they are not covered by federal deposit insurance. Other investments with comparable returns, such as money market deposit accounts, online savings accounts and certificates of deposit, are covered. Money market funds, however, have historically been extremely safe investments and are regulated under the Investment Company Act of 1940's.

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