# Liquidity Premiums

Fischer Black
Graduate School of Business
University of Chicago

What about risk?

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Many writers seem to think that long term bonds ought to return more than short term bonds because the individual who liquidates them before maturity may get less than he paid for them; in other words, that long term bonds ought to have "risk premiums". The capital asset pricing model, however, tells us that a long term bond is no different from any other asset: the risk premium on a long term bond should depend on the amount of market risk in the bond. As a first approximation, a bond probably has no market risk at all; all of its risk can be diversified away, so it should not bear any risk premium.

Other writers feel that long term bonds and other risky assets are less liquid than cash and short term debt securities because the transactions costs are greater. Other things equal, the argument goes, people would rather hold assets with small transactions costs than assets with large transactions costs, so they will accept lower returns on assets with small transactions costs.

This argument centers on the dealer spread as the irreducible portion of the transactions cost. If an investor liquidates an asset because he needs the cash, then presumably he sells the asset immediately at the current bid price. (And if an investor buys an asset because he has cash available, then presumably he buys the asset immediately at the current asked price.) If he buys and then sells immediately, he pays the dealer spread.

Some have argued that the dealer spread compensates the dealer for the risk of changes in the value of his inventory (or the value of his short position). But we know that the expected return on his inventory automatically compensates him for his inventory risk. To the extent that the inventory risk is market risk, the expected return on his inventory will compensate him directly. To the extent that the inventory risk is specific risk, he can eliminate it by diversifying. In fact, on the New York Stock Exchange we find dealers banded together into specialist firms, where each firm handles a diversified portfolio of stocks from a number of different industries.

Treynor argues that the dealer spread compensates the dealer for the fact that he loses money at a certain rate to people who have more information about a company than he has. The dealer is unable to tell whether a trader is acting on special information or out of a need to shift into or out of cash. As a result, he must charge all traders his spread.

Treynor's argument seems valid in the following sense: a person without special information, buying or selling a specific risky security, can expect to lose an amount related to the dealer spread to other traders who do have special information. This can be true even if there is no actual dealer, and all trading is done by matching orders.

However, his argument seems to have little relevance to the person who is trying to deal with uncertain cash flows, since such a person does not need to make transactions in risky securities at all. A person can handle uncertain cash flows by buying and selling sure assets: cash, savings deposits, Treasury Bills, commercial paper, and other short term debt securities. In addition, he can add to or reduce his short term liabilities such as bank loans. Treynor's argument does not apply to these assets at all: since they are short term assets, they do not need to be traded, and since they are virtually riskless, no special information is involved in setting prices on these assets. So there

certainly will be no dealer spread of the type Treynor describes, and we will have to look elsewhere for an explanation of the transactions costs on these assets.

An individual generally does not have any reason to hold particular assets. He can earn risk premiums by holding some amount of the market portfolio, and the amount he wants to hold will not ordinarily be affected by his cash flows. When large unexpected cash flows change his wealth, or when he receives information that changes his wealth, he may want to adjust his holdings of the market portfolio. But Treynor argues convincingly that dealer spreads on the market portfolio will be virtually zero, so this is not a factor. Note also that the individual adjusts his holdings of the market portfolio when he receives new information, and this information will rarely come in the form of an unexpected cash flow.

The individual certainly does not have to hold long term bonds, and he does not have to hold individual securities. He will hold long term bonds (other than as part of the market portfolio) only if he believes he has special information on the future course of interest rates. He will hold individual common stocks (long or short) only if he believes he has special information on the companies involved.

Thus we can view all trading in risky securities as information motivated. This means that the liquidity supposedly provided by dealers and specialists who stand ready to buy and sell from their inventories is of dubious value. If a person is anxious to buy or sell because he has a valuable piece of information, it hardly seems to hurt society to make him wait until a matching order comes in from someone else who believes he has valuable information of the opposite kind. Immediate execution of market orders seems to be very unimportant if all orders are information motivated.

Actually, in a full equilibrium model, there will be no trading in individual risky securities at all. If there is no liquidity motivated

trading, then information motivated traders on average will not make money. Those with better information will make money at the expense of those with worse information. But this will cause those with worse information to drop out of the game. Since there will always be some people with better information and others with worse information, more and more people will drop out, until there are no more people left. Prices will adjust instantaneously on the arrival of new information, but the force that causes the adjustment will be potential trading rather than actual trading.

Ignoring the differences between the various short term securities, we can classify people as net lenders of short term securities or net borrowers of short term securities. When a lender receives an unexpected cash payment, he simply adds to his holdings of short term securities; when he is forced to make an unexpected cash payment, he simply reduces his holdings of short term securities. When a borrower receives an unexpected cash payment, he reduces his loan; and when he is forced to make an unexpected cash payment, he increases his loan.

In the extreme, we can suppose that checking accounts pay interest at the going rate and that negative balances are allowed that are charged interest at the going rate. In this case, it is clear that cash flows, whether expected or unexpected, will automatically change a person's holdings of short term interest bearing assets.

I am arguing that long term bonds, like other specific risky assets, will be held or sold short only for speculation on interest rates. They will not be held as liquid assets or as substitutes for short term borrowing and lending.

One objection that some will make to this view is that it costs the borrower too much in transactions costs to be continually issuing short term notes. It is cheaper for both borrower and lender to issue one long term bond than a whole series of short term notes. This argument

disappears, however, once we separate the transactions cost of issuing or transferring a note from the pure interest rate on the note. The transactions cost can be paid once when the lender buys a short term note, and again when he refuses to accept a replacement for a maturing note. So long as he holds a continuous series of short term notes, the cost to him or the borrower should be no greater than the cost of issuing a single long term bond. Thus if transactions charges are separated from interest payments on short term notes, and if they are applied only when the lender refuses to renew the note, the cost of issuing a series of short term notes should be no greater than the cost of issuing and transferring a long term bond.

Another objection that might be raised is that some individuals have real assets with fixed future cash flows, and they want to reduce their risk by selling long term bonds that mature on the dates of these cash flows. First of all, it is hard to imagine a real asset with fixed future cash flows. And second, who will want to buy the long term bonds that these individuals want to sell?

Finally, some claim that an individual has a specific horizon that he uses for his investment decisions, and that he maximizes the expected utility of his wealth at that time. It is claimed that these people will want to buy or sell long term bonds that mature at their horizons.

It is hard for me to believe that individuals have such horizons. The most general approach to individual decision making is to assume that an individual maximizes the expected utility of his total consumption stream over time. It is only because this problem is hard to handle analytically that horizons were invented.

Even if individuals have distant horizons, the usual argument is incorrect. The usual argument is that a long term bond is riskless, and a series of short term notes is risky for such an individual, so he will demand a higher rate of interest on the short term notes. This argument assumes that there are no other assets in the world. In fact,

we should be looking at the market risk in an asset, not the total risk. If the market risk (from a one period point of view) of a long term bond is positive, then the market risk (from a horizon point of view) of a series of short term notes will be negative. Thus the horizon argument gives the same conclusion as the one period argument: short term notes should have a lower expected return than long term bonds. If the market risk in long term bonds is negative, then the two arguments still give the same conclusion: short term notes should have a higher expected return than long term bonds. And if the market risk is zero, they should both have the same expected return.