

Opportunities and risks of dividend spreads

Daniel Arthur Laprès

Avocat à la Cour d'Appel de Paris
Barrister and Solicitor (Nouvelle Ecosse)
Professeur, Faculté Libre de Droit, d'Economie
et de Gestion (Paris)

Farrell Laprès

Assistant Vice-President for Risk Management
- Merrill Lynch Professional Clearing Corp. -
San Francisco.

The new tax law amendments will incite companies to pay out more of their earnings in dividends which will heighten the already considerable interest in dividend spreads. clearing firms in particular need to address the problems of managing the risks arising in connection with such trading strategies.

Une récente réforme fiscale aux États-Unis incitera les sociétés à augmenter leurs distributions de dividendes et ceci engendrera une intensification de l'intérêt déjà significatif pour les stratégies utilisant des combinaisons de positions sur les actions d'une société versant des dividendes et les options sur l'action. Les sociétés de compensation en particulier doivent anticiper et gérer les risques survenant en relation avec ces stratégies.

I - Introduction

Dividend spreads give rise to specific risks which require the attention of financial risk managers. Mistakes in managing these risks can be fatal even for large operators. As the recent tax amendments will encourage companies to increase their dividend payouts, the volume of dividend spreads is likely to increase. Clearing firms in particular need to address the problems of managing the risks arising in connection with such trading strategies.

1 - Tax reform

In the United States some 35 million people receive dividends. More than half of them are senior citizens and more than 40 percent of people who receive dividends make under \$50,000 per year and three-fourths make less than \$100,000 per year.

In the American tax system, a company is first taxed on its profits, then dividend distributions are taxed in the hands of shareholders. The result is that, according to some estimates, for every dollar of profit a company could pay out in dividends, as little as 40 cents can actually reach shareholders.

The recent tax reform in the United States eliminated the double taxation of dividends for millions of stockholders by allowing taxpayers to exclude dividend payments from their taxable income. An estimated \$ 20 billion will remain in the hands of taxpayers.

Accordingly, distributions of dividends are likely to increase under the tax reform. As a side effect of this process, opportunities to implement dividend spreads and the magnitude of the potential gains, and risks, of such strategies will attract increasing interest of traders and risk managers.

2 - The use of dividend spreads

When companies announce a dividend, they announce the dividend amount, the record date, the x-date and the payment date. In order to be a legitimate owner of a stock and be entitled to the dividend, an investor must buy the stock no later than the record date. The x-date is two days before the record date stocks have 3-day settlement, so options purchased and exercised the day before the x-date can be converted into “dividend receiving” stock (American-style options can be exercised any time before expiration, whereas European-style options cannot be exercised before expiration).

This often creates considerable option activity in companies that are going x-dividend. The day before the x-date option traders seek to “capture” or “get away with” the dividend by executing “dividend spreads”. Dividend spreads involve the purchase and sale of “in-the-money” call options. Some traders buy and sell the same number of contracts in the same option series.

The objective is to exercise all long contracts (purchases) and hope that some of the short contracts (sales) are not assigned by the other side. Some of the circumstances giving rise to failures to exercise going into the x-date would be:

- error of a trader or clearing firm
- capital limitations on the public (calls are cheaper to own than stocks) and,
- risk factors such as in the event of breaking news or such as arise when the option strike price is too close to the trading price of the stock

If all longs are exercised properly they will convert to long stock and all assignments will turn into short stock. If the number of exercises equals the number of assignments, then the trader will not have a position on the x-date and he will not have “captured” any dividends.

If an option trader exercises all his longs but does not get assigned on all his short contracts, then he will have a long stock vs. short call position (covered write). Assuming all other factors unchanged, on the x-date the stock price and the deep in-the-money calls should decrease by the amount of the dividend. No value is created for the shareholder in the process, since instead of owning a stock worth \$X, the stockholder owns a stock trading for \$X - \$D and receives \$D as a dividend payment.

The trader breaks even on the x-date but is owed the dividend on the pay-date (usually within 2 weeks).

In order to increase the odds of not being assigned, option traders seek in-the-money options with the most open-interest.

When a trader captures the dividend and the stock stays above the strike price until expiration, the trader has been rewarded and will most likely attempt to do more and more of these dividend plays.

THE OPPORTUNITIES

RJR pays a 95-cent dividend quarterly. Assume RJR is trading at \$53.00 a share. Assume also that the record date is announced to be Tuesday, September 7th, 2004 and therefore the x-date would be Thursday, September 2nd (2 business days prior).

On September 1st, a trader buys and sells 20,000 Sep 50 calls (3 points in-the-money).

Trader exercises all 20,000 contracts that were purchased.

Trader only gets assigned on 19,000 of the shorts (95%).

Coming into the x-date the trader would be long 100,000 shares of RJR and short 1,000 Sep 50 calls (each option contract represents 100 shares of stock).

Assuming that the market opens flat on the x-date RJR would open at \$52.50 and the Sep call might open at 2.05 (\$205), both down by the amount of the dividend.

If RJR stays above \$50 00 until expiration (options expire on the Saturday following the 3rd Friday of the month), the position will disappear as the short calls become short stock. The trader receives 95 cents on 100,000 shares (\$95,000) and that would be the profit from the "dividend spread", less commissions.

II - Defining the risk on dividend spreads

Dividend spreads generate both operational and market risks.

1 - Operational risk

To compute operational risk, the determining factors are: 1) the holder's "at risk" equity, 2) the amount of the dividend, 3) number of spreads, and 4) the probability of an « unclean » exercise. Except for the last factor, the information is known prior to the x-date.

For calculating how many exercises a clearing firm should pertaining to operational risk, the formula would then be:

$$C = \frac{(E \times X)}{(P \times D)}$$

Where C is the maximum number of contracts allowed

E is the trader's equity

X is the amount of equity a trader is allowed to risk (100% = 1)

P is the probability of unclean exercise ($0 < P \leq 1$)

D is the amount of the dividend (in cents)

If P were 0, then there would theoretically be no limit to the number of dividend spreads parties could subscribe, as there would be no "operational risk". From observing OCC data, it appears that approximately 4-5% of options do not get exercised although the range varies from 25% in some cases to almost none in others. So assuming that, to be conservative in the interest of protecting clearing firms and traders, the failure rate is 20% and firms are only willing to tolerate 25% of any account being lost on one of such spreads.

THE RISKS

Let us assume a failure rate of 20% on any given expiration.

Let us also assume that a clearing firm might tolerate a loss to any account of up to 25% as the result of any given dividend spread.

If

$$E = \$ 1,000,000$$

$$X = 0.25$$

$$P = 0.20$$

$$D = 95$$

Then

$$C = \frac{(1,000,000 * 0.25)}{0.20 * 95} = \frac{(250,000)}{19} = 13,158 \text{ contracts}$$

A trader doing 13,158 contracts in RJR and failing to exercise 20% of them would lose \$250,002.

2 - Market risk

Market risk affects the probability of a decline in the price of the stock when the operator is synthetically short the puts in the stock. In such event, risk depends not only on the number of contracts held but also on how far "in-the-money" any unassigned options might be as well as the time remaining until expiration. The volatility of the underlying stock should also be a pertinent factor in determining which option series should be played.

Accordingly, it does not suffice to place limits on the number of dividend spreads, the total risk must be quantified.

HOW OPERATION RISK CAN BECOME MARKET RISK

Pursuing the above hypothetical example involving RJR, suppose that a trader exercises all 2,000 long calls, converts to 200,000 shares of RJR.

Late news breaks out in RJR and it is very bad. Many of the holders of long calls hear the stock may trade around \$45 in the morning. Many of the owners of Sep 50 calls decide not to convert their long calls into dividend receiving stock. Assuming only a 50% assignment rate, on the x-date the trader's opening position is short 1,000 Sep 50 calls and long 100,000 shares of RJR.

On the x-date, with the underlying price at \$45, the trader loses \$8 on 100,000 RJR and makes \$300 on the short calls 1,000 times. The net loss from the covered write would be \$500,000 ($\$8 * 100,000$) - ($\$300 * 1,000$). The trader would be owed the dividend payment of \$95,000 to narrow the loss to \$405,000 plus commissions.

III - Managing the risks on dividend spreads

Several measures can be adopted to manage the risks arising in connection with dividend spreads. Attention should be paid specifically to the task of properly completing all exercise procedures. Some clearing firms may be able to double exercise in the "firm" and "customer" ranges to add a degree of safety. Larger operators with many customers would not double exercise for fear of exercising options that were not intended to be converted to stock.

Where a *bona fide* error occurs and is discovered, it should be corrected expeditiously including by invoking the applicable Option Clearing Corporation procedures and by assuming any applicable penalties, which can reach amounts of \$ 20,000 per error.

Market risk associated with dividend spreads may be addressed by discouraging traders from putting on such positions when a move in the price of the stock is anticipated as a result of breaking news or general market weakness. Clearing firms should require option traders to contact the risk department to have all dividend spread activity approved prior to execution.

The risk manager can require traders to purchase puts in anticipation of call options going unassigned. This would reduce risks by creating a "conversion" (long stock, short call, long put) rather than entering the x-date with a covered write.

By assigning a higher probability of being un-assigned to option strikes that are "at the money", a risk manager can estimate market risk with a greater degree of safety.

For example, option strikes that are less than 5% in-the-money could be given a 30% failure rate and deeper strikes would be attributed much lower failure rates, to reflect the level of risk. The risk manager can estimate a trader's potential position coming in to the x-date and evaluate risk on that basis.

IV - Conclusion

Dividend spreads give rise to risks which are insufficiently recognized and which are often underestimated. With proper operational procedures, prudent hedging strategies, favorable market circumstances and some luck, traders can earn substantial windfalls from dividend spreads. But, as human error is inevitable, including for traders setting up dividend spreads, the existence of very large, and accordingly very risky, dividend spread positions require the specific attention of risk managers.