

Trading Multiple Instruments: Maximizing Your Profits

We've all been taught to diversify our stock investments for safety-the appropriate saying is "Don't put all your eggs in one basket". But should traders follow this same advice or should they focus on one instrument? And if they trade more than one thing, how much of each do they trade? How do professional money managers measure and balance risk when they trade a portfolio of instruments?

Some traders should focus on one type of instrument. Like anything else in life, some people are best suited for doing one thing well and just that one thing. Some other traders find that as they mature as traders, they are able to trade more instruments and they begin to branch out to trade new things.

Let's imagine a trader that starts out trading E-mini S&P futures on the Chicago Mercantile Exchange and when corn and soybean futures pick up in volatility and begin to trend day after day, they find themselves watching and then trying to trade these new interesting markets. This trader usually trades one E-mini S&P future, and they have been making money consistently in this market, but how many corn futures should they trade? One? Three? Ten? Does it matter?

In general, there are two schools of trading: discretionary traders and systems traders. Pure systems traders run statistics on their system and they follow the signals put out by their models religiously. Discretionary traders make decisions about their entries and exits based on their internal knowledge of the trading tools they use. But discretionary traders can be very systematic-and in my opinion should be very systematic in their decision-making and trading practices. Discretionary traders should have realistic expectations about the probability of success of their entry and exit methods and be very disciplined about following their own trading plans. When discretionary traders learn to approach the markets in a consistent manner, their profits generally improve quite a bit. In essence, these profitable traders are discretionary traders that approach the markets in a systematic manner. They find what works and then do it over and over again.

How do these traders maximize their profits if they trade more than one instrument? Let me start with a general statement: it doesn't make any sense if you spend a specific amount of time and energy successfully trading the E-mini S&P futures market and on one contract, average \$600 net profit per trade and then spend that same amount of time and energy to trade one contract of corn and on average, make \$75 per trade. As a trader, you have a limited amount of time, energy, emotion, and capital. One of the most important lessons a trader must learn is to maximize their return on each of these. So how can a corn futures contract be compared to an E-mini S&P contract?

My experience in this area began as the head of risk management at a major US bank and was refined when I began managing large amounts of an investment fund in the early 1990s for Commodities Corporation. At the bank, all risk was compared to the United States 30-day Treasury Bills. The largest one-day range from the prior day's close to the current day's close [Average True Range] over a three-year period was used as the general measurement of that instrument's volatility. By taking that measurement and multiplying it by the value of the contract, it's easy to calculate a measuring stick for each 'thing' you want to compare: a futures contract, foreign debt instruments, stocks, real estate, mortgages, plane leases-literally anything you can invest in or trade can be compared using this method.

Why would you want two positions that are equally risky? If you have a finite amount of time, energy, emotion, and capital, you will maximize your returns if you risk the same amount of these things each time you trade. It makes no sense to make a successful corn futures trade that nets you \$75 and use the same amount of your limited resources when you could have made a trade in the E-mini S&P futures, used the same amount of these limited resources, and netted \$500 on that trade. If you were too busy trading the corn position to take an E-mini S&P position when it appeared, you just cost yourself \$425 in potential profits by not making your risk equal.

Once you understand the concept, the calculations are simple. First, I start out by picking out an instrument to act as my default 'risk point' default. That means I make it my standard to set all other position sizing in all other instruments. I list all the instruments I'm going to trade in a spreadsheet. Then I gather the daily average true range for each instrument going back at least five years. The largest average true range found in that period multiplied by the value of the contract gives me the largest risk in dollar terms I would have faced in each instrument over that time period. Remember: Risk is a two-edged sword. If I had the right position, I would have made that amount or some portion of it-if I had the wrong position, I would have lost that amount or some portion of it.

Now that I have a list of instruments, and I know the largest risk in dollar terms for each instrument, I add in the stop loss sizes I use for each instrument. Then I simply set my spreadsheet to show me how many of each instrument I need to trade to face the same risk, right or wrong, so that each time I trade any of these instruments if I am right, I'll be averaging about the same amount of profit per trade. And when I'm wrong, I'll be losing about the same amount. This is called equivalent risk and if you trade more than one thing, using this methodology will help maximize your profitability.

Let's look at a simplified example of my equivalent risk spreadsheet:

	A	B	C	I	J	K	L	M	N	O	P	Q	R	S
1	Equivalent Risk Sizing Matrix													
2														
3			Portfolio Size in Millions of \$US Dollars:			100								
4														
5		SYMBOL	DESCRIPTION	MAX ATR	\$/IMM	FCTR	UNIT	STOP	1 PT VALUE	UNIT RISK	CAP	TOTAL RISK	CONTRACTS	
6														
7	CURRENCIES													
8		CD	CANADA-IMM	0.0086	36	100	26.71	0.00946	\$1,000	\$25,265.63	\$100.00	\$2,526,562.50	2,670.78	
9		6E	Euro FX CME	0.0175	10	100	7.50	0.01925	\$1,750	\$30,625.00	\$100.00	\$3,062,500.00	750.00	
10		6J	Yen CME	0.0112	22	100	16.41	0.01232	\$1,250	\$25,265.63	\$100.00	\$2,526,562.50	1,640.63	
11	ENERGY PRODUCTS													
12		CL	CRUDE OIL	2.25	14	100	10.21	2.475	\$1,000	\$25,265.63	\$100.00	\$2,526,562.50	1,020.83	
13		NG	NATURAL GAS	0.86	4	100	2.67	0.946	\$100	\$25,265.63	\$100.00	\$2,526,562.50	267.08	
14	INDEXES													
15		SP	S&P 500 INDEX	33	4	100	2.78	36.3	\$250.00	\$25,265.63	\$100.00	\$2,526,562.50	278.41	
16		ES	E MINI S&P CME	24.5	25	100	18.75	26.95	\$50.00	\$25,265.63	\$100.00	\$2,526,562.50	1,875.00	
17		AB	E MINI Russell CME	33	9	100	6.96	36.3	\$100	\$25,265.63	\$100.00	\$2,526,562.50	696.02	
18	INTEREST RATES													
19		ED	EURODOLLAR-IMM	0.115	107	100	79.89	0.1265	\$2,500	\$25,265.63	\$100.00	\$2,526,562.50	7,989.13	
20		TS	10 YR T-NOTE	1.07	29	100	21.47	1.177	\$1,000	\$25,265.63	\$100.00	\$2,526,562.50	2,146.61	
21		TR	T. BONDS	1.75	18	100	13.13	1.925	\$1,000	\$25,265.63	\$100.00	\$2,526,562.50	1,312.50	
22	METALS													
23		HG	COPPER HIGH GRADE	23	5	100	3.99	25.3	\$250	\$25,265.63	\$100.00	\$2,526,562.50	399.46	
24		GC	GOLD-COMEX	21	15	100	10.94	23.1	\$100	\$25,265.63	\$100.00	\$2,526,562.50	1,093.75	
25		SV	SILVER-COMEX	0.825	7	100	5.57	0.9075	\$5,000	\$25,265.63	\$100.00	\$2,526,562.50	556.82	
26	GRAINS													
27		C	CORN-CBT	13	47	100	35.34	14.3	\$50	\$25,265.63	\$100.00	\$2,526,562.50	3,533.65	
28		S	SOYBEANS-CBT	24	26	100	19.14	26.4	\$50	\$25,265.63	\$100.00	\$2,526,562.50	1,914.06	
29		W	WHEAT -CBT	27	23	100	17.01	29.7	\$50	\$25,265.63	\$100.00	\$2,526,562.50	1,701.39	
30	MEATS													
31		LC	LIVE CATTLE-CME	2.48	31	100	23.15	2.728	\$400	\$25,265.63	\$100.00	\$2,526,562.50	2,315.40	
32		LH	LIVE HOGS	2.1	49	100	36.46	2.31	\$300	\$25,265.63	\$100.00	\$2,526,562.50	3,645.83	
33	SOFTS													
34		OJ	ORANGE JUICE	6.2	33	100	24.70	6.82	\$150	\$25,265.63	\$100.00	\$2,526,562.50	2,469.76	
35		SU	SUGAR #11	0.83	33	100	24.71	0.913	\$1,120	\$25,265.63	\$100.00	\$2,526,562.50	2,470.82	
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In this example, my spreadsheet only shows US futures contracts. And by default, the portfolio size or amount of capital available is \$100 million US dollars. Using those settings and using the CME euro FX currency futures as the standard measuring instrument, I would trade 750 euro FX currency futures. And when I trade corn futures, I would trade 3,534 contracts to have an equivalent risk. In the E-mini S&P futures, I would trade 1,875 contracts. You can see it's simple to know just how many contracts of each instrument to trade to achieve equivalent risk once you set up this simple spreadsheet. And if you look at the very top of this spreadsheet, there's a row named 'Portfolio in Millions of \$US Dollars' and after it, you'll see the number 100. If you simply replace 100 with 1, the spreadsheet will recalculate all sizes to an account that has a value of one million US Dollars. Replace it with 0.1 and the portfolio will reflect an account of \$100,000. Or put in 0.01 and it will reflect an account of \$10,000. You may find that at \$10,000, this spreadsheet gives you a contract size of less than one. Remember, these numbers are based on the most extreme range over the past five years, so that means an account of that size would have been wiped out if you took a position larger than the one suggested by the spreadsheet and were wrong for the entire range of that day. This is a tool and you'll have to work with it to decide how best to include it in your trading. If you are a very short-term trader, these position sizes may seem very conservative. They are meant as a way for you to be able to compare 'apples to oranges.'

I hope this spreadsheet is interesting to you. Just as I made the Market Maps Trade Entry sheet available to anyone that would like to try using it, if you drop me an e-mail at tmorge@sbcglobal.net, I'll be glad to send you a copy of this spreadsheet. And if you have questions, by all means don't hesitate to e-mail me and ask them! PLEASE don't use these calculations blindly. Make sure you understand what the spreadsheet does and then double check the average true ranges in this spreadsheet, as well as the standard measurements like the value of a one point move. NEVER use a tool until you have researched it and thoroughly understand it.

I wish you all good trading!

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