WHAT IS NOTIONAL FUNDING?

Managed Futures and CTA Education – 9 pages

Part 1

Notional funding is a concept unique to the Managed Futures industry, whereby an investor is able to leverage their cash investment by taking on additional risk for higher expected returns.

When someone decides to "notionally fund" their managed futures investment, all that means is that they are only investing a portion of the minimum investment required by a CTA - Commodity Trading Advisor.

For example, let's assume that a CTA's minimum investment is $100,000 (also known as the nominal account size), but they allow the account to be notionally funded with only $25,000. In this instance, it is the investor's decision on whether they would like to notionally fund the account with $25,000 cash, fully fund the account with $100,000, or fund somewhere in between $25,000 - $100,000.

The reason that notional funding is possible in Managed Futures investments is because at any given time, a CTA is only using a percentage of the nominal account size as *margin* to conduct investment activity. Therefore, as long as you fund enough cash to cover the margin, AND have enough buffer to sustain a realistic loss, then notional funding can be a great investment tool.

If an investor decides to fund the $100,000 investment with only $25,000, this is how each component would be labeled:

Investment Size	Cash Funding	Notional "extra" Funds
$100,000	$25,000	$75,000

This means that the investor is using leverage of 4X - four times $25,000 equals the $100,000 minimum investment. The difference between the investment size (nominal size) and the cash funding is equal to the notional funds.

Investors are interested in using notional funding because notional funding capitalizes on the free cost of leverage. The leverage is free because the notionally funded amount (in this case, $75,000) is not borrowed or invested - the cash funding ($25,000) is a good faith deposit for the full value of the account. Therefore, if the investment is doing well, then the investor benefits on the performance of the $100,000 investment size, BUT if the investment is going through a losing period (or drawdown), then the investor will be responsible for those losses.

Using the same example above, let's say a CTA returns 10% for the year, that would be a $10,000 return on the investment, however, if you have only funded the account with $25,000, that would be a 40% return on your cash funding. On the other hand, if a CTA loses 10% for the year, that would be a $10,000 loss on the investment, which would amount to a 40% loss on the cash invested. Assuming the same example as above, here is a table summarizing various rates of returns and the profits and losses associated with each:

Rate of Return	Profit/Loss on Nominal Account Size	Rate of Return on Cash Funding
10%	$10,000	40%
15%	$15,000	60%
20%	$20,000	80%
-10%	($10,000)	-40%
-15%	($15,000)	-60%
-20%	($20,000)	-80%

As you can see from the table, notional funding has its pros and cons!
The pros are obvious - you are able to take advantage of the free cost of leverage, and earn a higher percentage on your investment dollars. While the upside of notional funding looks very attractive, an investor should also consider the downside. In our example, a -20% drawdown would mean the loss of 80% of the cash funding. In this situation it is very likely that the investor would have to add more money in the account in order to keep it going.

* From the example above, you can see why the cash funding percentage is very critical to an investor's success. The above example is used just to illustrate the potential that notional funding has to offer, but in most cases, one would not recommend to fund any account with 25% cash funding. * We believe that the most efficient funding level for most managed futures accounts should be 50-75%, however this could vary from CTA to CTA. We think 50-75% provides the balance between using the free cost of leverage, while also leaving a buffer for expected losses. Using the same investment example above, the below table illustrates what the rate of returns would be if the cash invested was $50,000 instead of $25,000.

Rate of Return	Profit/Loss on Nominal Account Size	Rate of Return on Cash Funding
10%	$10,000	20%
15%	$15,000	30%
20%	$20,000	40%
-10%	($10,000)	-20%
-15%	($15,000)	-30%
-20%	($20,000)	-40%

By funding the account with 50% or $50,000, the rate of return on cash funding decreases, but so do the losses. If a CTA experienced a 20% drawdown, that would result in a 40% loss on the cash invested - a large loss, but not large enough to where in most cases an investor would not have to add additional funds.

You have to keep in mind that the notional funding percentage that an investor is comfortable with will vary from investor to investor and vary from CTA to CTA. An investor may be comfortable with 25% cash funding with one CTA, but only be comfortable with 50% with another CTA. When considering notional funding, it's best to speak with your advisor to discuss the potential pros and cons of the funding level that you are considering.

Part 2
Benefits of Managed Futures and Making Use of Notional Funding

One of the main benefits of investing in managed futures is the ability to do so through Notional Funding in a separately managed account – whereby you don't have to put up a cash deposit equal to the program's minimum investment amount in order to invest in that program. For example, it is possible to trade a $1,000,000 account (QEP Investors only) with a cash deposit of just 200k.

If you are saying, so what…. you can put up just a portion of the investment amount in all sorts of investments: stocks via a margin account, real estate via a mortgage, art via a credit card; you are missing the one big difference. That difference is that there is a cost to buying stocks on margin or purchasing real estate with a mortgage. That cost is the cost of money or the interest rate you pay to borrow the funds to purchase the investment you are interested in.

With notional funding, there is no borrowing of money and therefore no interest rate and no cost of money. How can there be no borrowing? Because we're not talking about someone loaning you $1 mm to meet the minimum (or about trading a smaller version of the program with $200K), we're talking about having $200,000 *traded as* $1,000,000 via the use of notional funding.

Notional Funds

Notional funds represent the difference between a managed futures investment's minimum investment amount and the amount of cash an investor is willing to put towards a managed futures program at that time. An investor may not have the full amount of the minimum, or wish to only put up a portion of the minimum and use the rest for another investment. In a way; notional funds can be thought of as added money which is used to bridge the gap between the cash outlay an investor is willing to put towards a managed futures program at that time, and the stated minimum amount of that program.

A quick example is probably the easiest way to describe it. Take the aforementioned program (QEP Investors only) with its minimum investment amount of $1,000,000. An investor does not actually have to have all of that money in their account in order to trade the program. Levels of notional funding vary between managers, but for this example, the CTA manager will allow clients to use notional funds to cover up to 80% of the investment minimum.

The actual cash balance plus the notional funds balance equals the required minimum investment amount of $1 mm. Another way to think of how this works is to imagine having that $200,000 account, but telling the manager to trade is as if it was $1,000,000.

Part 3

If you're asking "how the heck can you trade more than what you have in your account?" – here is the explanation.

To understand how an investor can use these notional funds, we must first back up a step and understand how a managed futures advisor arrives at their minimum investment amount. Minimum investments could, or perhaps should, be further split up into three distinct levels, specified as:

1. **The Margin Minimum**: the technical minimum amount needed to actually place the trades on the exchanges
2. **The Drawdown Minimum:** the amount for an investor to withstand any eventual drawdown of the investment
3. **The Window Dressing Minimum:** the amount to make the percentage drawdowns and returns attractive to the greatest number of investors.

Margin Amount: The first part of the minimum investment amount is the amount technically needed to place trades. This is what the exchanges and clearing firms refer to as the margin requirement. Any account which wishes to trade a futures contract on a regulated futures exchange like the Chicago Mercantile Exchange must first have enough money in the account to cover the performance bond requirement of the exchange (the margin). This insures that the exchange can make the trader who takes the other side of the trade good should the trade go against the account.

Margins can sort of be thought of as the amount of money which could be lost on that position in a single day – and the exchanges and clearing firms make sure each account has that much money – or else the whole system doesn't work. If this wasn't in place, where would a winner get her winnings from – the loser could disappear.

Drawdown Amount: The second part of the minimum investment amount is the amount an investor needs to withstand any eventual drawdown. Again, this is another technical level of sorts, in that an account must have at least that amount in order to stay above zero. If the investment has the possibility of losing $150,000, for example, in the normal course of operation, then an investor better have at least that amount in order to proceed. If they didn't, they would have to get out of the investment during the normal ups and downs of the investment.

Think of it like a tank of gas; if you are driving 100 miles and need 5 gallons of gas to get there, you better have at least 5 gallons of gas in the car – or else you'll never get there.

Window Dressing Amount: The third part of the minimum investment amount is the amount needed to make the percentages appealing to potential investors, or "window dressing" amount. Unlike the margin amount, it is simply the amount the CTA advisor computes in order for the average returns and risk of his or her program to have a cash buffer and meet industry performance benchmarks.

Imagine an advisor with average annual returns of $100,000 and drawdowns of $50,000. If that advisor sets his minimum at $100,000 – the average annual return in percentage terms is 100% with a 50% drawdown; while if the advisor sets his minimum at $1,000,000 – the average annual return in percentage terms is 10% with a 5% drawdown. While the returns in dollars are exactly the same, the advisor would likely find much more success raising money with the $1 Million minimum amount, because investors will ignore programs with large drawdowns such as the 50% drawdown number. The difference between the desired minimum and the minimums needed for margin and drawdown is the window dressing amount, and it is often this amount which can be "notionalized."

If we look at a fictitious CTA program with a $1 million minimum investment, and 15% average margin usage, and -25% max drawdown as an example, those levels would be:

Past performance is not indicative of future results.

Understanding that up to 80% of a managed futures program's stated minimum investment amount can be nothing more than window dressing gets us a step closer to understanding how you can use notional funds, when investing in a managed futures program.

It should be clear that while an investor actually needs both the 'technical amount' for margins and 'drawdown amount' to stay alive, the investor doesn't necessarily need the window dressing amount. If it is only there to make the returns and drawdowns more palpable for most investors; an investor who can stomach much larger percentage gains/losses (you will have the same dollar gains/losses) doesn't need window dressing.

Part 4
Example of How can you use notional funding?

For those investors who don't want the window dressing, (those who can handle 3 to 5 times the percentage gains and losses), notional funding is perhaps the most efficient form of investing available to investors. Once investors understand that the window dressing amount is only to make them feel better about how much (in percentage terms) they have made or lost – they are free to take that window dressing amount and use it for other purposes.

* Notional funding also allows for the trading of multiple managed futures programs with a single cash allocation. Assume an investor wants to put $900K into managed futures. An investor could use all of those funds on one manager, or could trade a balanced managed futures portfolio with three or > managers, totaling $3 Million in initial investment amounts, with just the $900K in cash.

This would represent leverage of roughly 3.3 to 1 in the account ($900K traded as $3 Million), and the investor would see percentage gains and losses on his $900K that are 3.1 times what an investor putting up the full $3 Million would see.

Now come the fun part touched on in the beginning of our discussion. The cost of doing this is zero. There is no interest rate charged on the notional amount like you have in the stock market when buying shares on margin or when buying a house with a mortgage. This is because there isn't any real money behind the notional funds, thus you aren't borrowing any money and thus there is no charge for the notional funds you employ. The notional funds are, in a way; nothing more than the amount of leverage you are taking on. The more notional funds you use; the more leverage you are applying to your investment.

Part 5
What are the risks of notional funding?

While there is no physical cost to notional funds, one "cost" is that the fees charged by the manager are on the nominal amount of the investment (meaning the full minimum amount), not the cash balance in the account. So if the program you're participating in has a 2% management fee, that will balloon to an 10% annual fee on your cash amount if you used 20% cash with 80% notional funds to meet the minimum. Likewise, commissions will have a much bigger impact on the account in percentage terms.

It is important to note, however, that the fees and commissions will not be any different, in dollar terms, than they would be if fully funding the account. Consider a $1,000,000 minimum investment program, which an investor invests in using $250,000 cash and $750,000 notional funds (25% cash/75% notional). The 2% management fee on this account would be charged on the $1,000,000 minimum nominal level of the account, meaning the charge would be $20,000. That $20K charge would be the same for an investor doing 100% cash/0% notional, 50% cash, 50% notional, and our 25% cash/75% notional example; but it would represent a 4% charge ($20K/$500K) for the 50%/50% account, and an 8% charge ($20K/$250K) for the 25%/75% account.

So while leverage through notional funding increases the percentage amount of fees and commissions, it has no effect on the dollar gains and losses. The key to understanding notional funds is to understand that while the percentages change – the dollars do not. The $20,000 in fees does not become larger – they stay at $20,000 no matter how much notional funds you use. They only become larger *as a percent* of the cash in your account, and only when the cash in your account gets smaller. So 2% of $1 MM = 4% of $500K = 8% of $250K. They all equal $20,000.

There is also a greater risk that you may lose more than you deposited in the account when using notional funds. If a $1 Million minimum program loses $500K, and you are notionally funding that account with just $250K (having $250K traded as $1 Million), your account will have lost $250K more than you deposited in it, and you will owe that

money to the clearing firm. Of course, even if you had fully funded the account, you would still lose the same $500K (again, the dollar amount of gains and losses does not change, only the percentage amount), and whether you notionally fund or fully fund – there is always the possibility with a futures investment of losing more than you deposit in your account.

The last negatives to consider are the mental anguish you may go through seeing percentage drawdowns 4 times those that are reported (but again, you're still losing the same amount of dollars) and the nervousness you may encounter when/if the a drawdown takes the account down to within a few hundred dollars of a margin call. And finally, if the account goes on a margin call in which you have to deposit more money into the account in order to keep trading with the program, the risk that you choose to cease trading the program instead of adding more money, and then miss out on the upside when and if the program rebounds.

Part 6

Understanding the concept of notional funding is helpful, but it's even better to get practical tips for using it. If you're new to the futures industry and are considering notional funding for your managed accounts, here are some pointers:

1 Don't overdo it. Using more than 50% notional funding isn't for the faint of heart. Your CTA usually reserves the right to refuse to allow you to use notional funding if the CTA believes you don't have enough experience investing or don't have the net worth appropriate to the leverage you're applying to your account.

2 Consider margin requirements in setting notional funding levels. If your CTA's typical margin to equity ratio is 40% or more and you're at 50% notional funding, you could find yourself getting margin calls on relatively minor drawdowns. You don't get much time to cover margin calls, so a temporary loss could be locked in for you when an FCM offsets your losing position because they don't hear from you quickly enough.

3 Factor in drawdowns and correlations to other managers in your portfolio. To protect yourself, it's worth a careful analysis of worst historical drawdowns and correlations across all managers in any portfolio you're putting together. Make sure that when bad things happen, they don't tend to happen to all your managers at the same time. Similarly, it's better to build a mix of managers who make money in different kinds of markets for different reasons to smooth out the return stream. Notional funding can play an important part in structuring the mix exactly the way you want it.

4 Get help from an experienced broker you trust. Some CTAs are better candidates than others for notional funding. For example, a meats trader that only uses 5% to 10% margin and trades once or twice a quarter might be a good candidate, while an S&P option trader that deploys a variety of strategies in a single account and trades every day might not be ideal. A good broker has been around long enough to have learned valuable lessons and can help you use this leverage tool appropriately.

Ask and Learn about notional funding from someone who has been working with CTAs or allocating on a notionally funded basis.