

## Option Handling in Moneydance

When setting up to handle an option you associate a security with the investment account then within that account you edit the security as outlined earlier and set the type to Stock Options. You should name the security to identify which option it is. Each option should have a unique ticker, as options can often be short term it is likely that prices will not be downloadable.

This then shows additional options as can be seen above, these options include:

Option	Purpose
Call/Put	Select whether this is a call or a put option
Stock Price	Set the Stock price
Exercise Price	Set the Exercise price
Exercise Month	Set the month the option can be exercised in
Comments	Additional Comments

For information the following definitions are provided.

You can both buy and sell options, we concentrate here on buying options.

### Call Options

An option contract giving the owner the right (but not the obligation) to buy a specified amount of an underlying security at a specified price within a specified time.

A call becomes more valuable as the price of the underlying asset (stock) appreciates.

### **Put Options**

An option contract giving the owner the right, but not the obligation, to sell a specified amount of an underlying asset at a set price within a specified time. The buyer of a put option estimates that the underlying asset will drop below the exercise price before the expiration date.

Moneydance does not have Buy to Open (BTO), Sell to Open (STO), Sell To Close (STC), Buy to Close (BTC) transactions that are often used with options but you can use Buy, Short, Sell, and Cover transactions to achieve the same results respectively. There may be an issue if you are downloading transactions from a broker as they may need to be converted to the appropriate Moneydance transaction (i.e. cover, short or sold), an expiration may be simply a "Bought" action at \$0 per share.

You need to enter the quantity as the obligation quantity and not the number of contracts. Each option contract is for 100 shares.

### ***Example of a Call Option***

As described earlier a call option is an option contract giving the owner the right (but not the obligation) to buy a specified amount of an underlying security at a specified price within a specified time.

There are various methods you can use to manage the data in Moneydance, this is one of them. The goal of this method is to have a zero real value until the option is executed or lapses. It is a right that has no financial impact until that time and until this time it is unknown if the right will yield a profit or a loss.

Options are general sold as a bundle with each bundle containing 100 shares, for this example we are going to have a call for 10 Acme options i.e. 1000 shares, the exercise price will be \$40 and there is a premium of \$2 per share, in summary:

	<b>Options</b>	<b>Shares</b>	<b>Exercise Price</b>	<b>Premium</b>
Acme	10	1000	\$40	\$2

Note that in Moneydance we need to use the actual number of shares not the number of options.

As already outlined you need to create the investment account (if appropriate) and the security for the options, associating the security with the investment account as per usual. You can then begin to record the option.

The first transaction to record is the Option contract. We will use a Cover transaction to do this. This looks like a buy transaction but the cash amount is not reflected outside of the Investment account. We are using a buy type transaction as this is an option to buy shares.

Typically the entries could look something like:

Field	Value
Date	The date you enter into the contract
Tax Date	The exercise date
Action	Cover
Description	As appropriate
Memo	As appropriate
Security	Select the Option
Shares	1000
Price	40
Amount	40000

This will show a negative cash balance of -40000 in the register but that will not be reflected outside of the register in the sidebar or summary page totals, however it will be included in reports. This transactions shows the total value of the call option.

Now suppose the market price has risen to \$45 and our contract states that the premium is \$2 per share, for our purposes think of the premium as a fee, So we have the following expanded information:

	Options	Shares	Exercise Price	Current Price	Premium
Acme	10	1000	\$40	\$45	\$2

We now enter a short transaction to marry the entries. Typically the entries could look something like:

Field	Value
Date	The date you exercise the right
Tax Date	The exercise date
Action	Short
Description	As appropriate
Memo	As appropriate
Security	Select the Option
Fee Category	Option Premium
Shares	1000
Price	45
Amount	43000
Fee Amount	2000

The result is a net profit of \$3000:

Option Value – Option cost, in this case:  $45000 - 40000 - 2000 = 3000$

This transaction leaves a balance of 3000 in the account this balance is now reflected outside of the Investment register.

Typically you would transfer these funds to the account where the profit has gone to.

### **Allowing a Call Option to Lapse**

With a call option your maximum liability is the premium i.e. you decide it is not worthwhile to exercise the option so you allow it to lapse, the premium is however payable in any case as it is part of the options contract. To achieve this you use a short transaction with the same price as in the contract for the exercise price but you add in the fee details.

We now enter a short transaction to marry the entries. Typically the entry could look something like:

<b>Field</b>	<b>Value</b>
Date	The exercise date
Tax Date	The exercise date
Action	Short
Description	As appropriate
Memo	As appropriate
Security	Select the Option
Fee Category	Option Premium
Shares	1000
Price	40
Amount	38000
Fee Amount	2000

This leaves a -2000 figure in the register which is also visible outside of it. This is set to 0 by a transfer from whatever account you used to pay the fee.

### **Example of a Put Option**

As described earlier this is an option contract giving the owner the right, but not the obligation, to sell a specified amount of an underlying asset at a set price within a specified time. The buyer of a put option estimates that the underlying asset will drop below the exercise price before the expiration date.

As outlined under Call Options there are various methods you can use to manage the data in Moneydance, we are going to use a similar approach what was used for the Call option. The goal of this method is to have a zero real value until the option is executed or lapses. It is a right that has no financial impact until that time and until this time it is unknown if the right will yield a profit or a loss.

Options are general sold as a bundle with each bundle containing 100 shares, for this example we are going to have a call for 20 XYZ Co. options i.e. 2000 shares, the exercise price will be \$10 and there is a premium of \$1 per share, in summary:

	<b>Options</b>	<b>Shares</b>	<b>Exercise Price</b>	<b>Premium</b>
XYZ Co.	20	1000	\$10	\$1

Note that in Moneydance we need to use the actual number of shares not the number of options.

As already outlined you need to create the investment account (if appropriate) and the security for the option, associating the security with the investment account as per usual. You can then begin to record the option.

The first transaction to record is the Option contract. We will use a Short transaction to do this. This looks like a sell transaction but the cash amount is not reflected outside of the Investment account. We are using a sell type transaction as this is an option to sell shares.

Typically the entry could look something like:

<b>Field</b>	<b>Value</b>
Date	The date you enter into the contract
Tax Date	The exercise date
Action	Short
Description	As appropriate
Memo	As appropriate
Security	Select the Option
Shares	2000
Price	10
Amount	20000

This will show a positive cash balance of 20000 in the register but that will not be reflected outside of the register in the sidebar or summary page totals, however it will be included in reports. This transactions shows the total value of the call option.

Now suppose the market price has decreased to \$8 and our contract states that the premium is \$1 per share, for our purposes think of the premium as a fee, So we have the following expanded information:

	<b>Options</b>	<b>Shares</b>	<b>Exercise Price</b>	<b>Current Price</b>	<b>Premium</b>
Acme	20	2000	\$10	\$8	\$1

We now enter a cover transaction to marry the entries. Typically the entries could look something like:

<b>Field</b>	<b>Value</b>
Date	The date you exercise the right
Tax Date	The exercise date
Action	Cover
Description	As appropriate
Memo	As appropriate
Security	Select the Option
Fee Category	Option Premium
Shares	2000
Price	8
Amount	18000
Fee Amount	2000

The result is a net profit of \$2000:

Option Value – Option cost, in this case:  $20000 - 16000 - 2000 = 2000$

This transaction leaves a balance of 2000 in the account this balance is now reflected outside of the Investment register.

Typically you would transfer these funds to the account where the profit has gone to.

### **Allowing a Put Option to Lapse**

With a put option your maximum liability is the premium i.e. you decide it is not worthwhile to exercise the option so you allow it to lapse, the premium is however payable in any case as it is part of the options contract. To achieve this you use a cover transaction with the same price as in the contract for the exercise price but you add in the fee details.

We thus enter a cover transaction to marry the entries. Typically the entries could look something like:

Field	Value
Date	The exercise date
Tax Date	The exercise date
Action	Cover
Description	As appropriate
Memo	As appropriate
Security	Select the Option
Fee Category	Option Premium
Shares	2000
Price	10
Amount	22000
Fee Amount	-2000

This leaves a -2000 figure in the register which is also visible outside of the account. This is set to 0 by a transfer from whatever account you used to pay the fee.

### ***Employee Stock Options***

In many ways an employee stock option is very much like a call option, so that presents one way of handling it. There are any number of approaches you can take to managing employee stock options. Moneydance does not have specific actions for this so there is likely to be some trade offs with any solution.

What is presented here is one possible approach.

Suppose you have a scenario where as an employee you were granted options for 100 shares in Acme Corp in Feb 2019 with a strike price of \$10 and a vesting period of 2 years (i.e. 50 shares in in 2020, 50 shares in 2021).

These are the steps to take.

1. Go to the "Account" menu
  - a) Select "New Account..."
  - b) Select "Investment" for account type
  - c) Enter your brokerage account info.
2. Open the newly created investment account
  - a) Select "Securities Detail"
  - b) Select "Add Security"
  - c) Select "New Security"
  - d) Complete the fields as follows:
    - Security ID: As required
    - Security Name: Stock and grant name

- Ticker Symbol: Stock Ticker Symbol
- Price: The exercise price
- Value Prefix: As required
- Value Suffix: As required
- Max. Decimal Places: leave at default
- Show on Home Page? deselect

3. and click "OK"

4. Back on the New Security screen complete the rest of the fields as follows:

- Broker: Brokerage details}
- Phone Number: As Required
- Type: Stock Option
- Sub-type: Add & Select Employee Options
- Call or Put: Call
- Stock Price: The exercise price
- Exercise Price: The exercise price
- Exercise Month: Select Month
- Comments: Detail to identify the grant
- Click "OK"

5. Open the "Register" for you your Investment account. Create the following New Transactions:

Typically the entries could look something like:

**Transaction 1:**

<b>Field</b>	<b>Value</b>
Date	Feb 1 2020
Action	Short
Description	Stock Option Grant
Memo	Award #{your grant/award number} 1 of 2
Security	Select the Option
Shares	50
Price	10
Amount	500

## Transaction 2:

Field	Value
Date	Feb 1 2021
Action	Short
Description	Stock Option Grant
Memo	Award #{your grant/award number} 2 of 2
Security	Select the Option
Shares	50
Price	10
Amount	500

### Vesting

There are three possible outcomes with a stock grant when it vests:

1. You could buy and keep the stock.
2. You could sell.
3. You could allow the stock grant to lapse.

As a guide some of the ways you could handle each of these are given below.

#### 1. Buy and Keep

The easiest approach is to change the short action to a BuyXfr action and select the financial institution the funds are to come from in the category field.

You could also enter a cover transaction at the exercise price to close the short out then use a buy or BuyXfr to effect a buy. The overall effect is the same it comes down to the detail you want to maintain. The second method more accurately represent when the funds moved between accounts

#### 2. Sell

To handle this outcome you can build on the buy approaches.

Assuming you do a sell on the same day as you exercise the grant, firstly you can change the short action to a Buy action. You then use a Sell to sell the security. You can then use a Xfr to move the profit to a selected account.

This method should see the profit reported in the Capital Gains report.

Another alternative is to enter a cover transaction at the received price price to close the short out. This leaves the profit in the account that you can then use a Xfr to move it to a selected account.

As of writing Moneydance is not reporting the capital gain correctly so it would be necessary to enter a transaction to have the capital gain reported in an Income and Expense report. Refer to the section on Option Report for a way of handling this.

### 3. Lapse

The simplest approach is to enter a cover transaction at the exercise price to close the short out.

#### ***Option Reporting***

Unfortunately, although this method meets many objectives in recording option trading, it does not show the profit in any category as it is a transfer. Through the use of an extra transaction we can however facilitate this.

To record the amount of the profit so that it shows in Income & Expense reports. You will need to create two categories:

- Tax:Investment Reporting
- Investment:Options Profits

To do this record a transaction as follows in the register of the security sold:

<b>Field</b>	<b>Value</b>
Action	DivXfr
Description	<security> "Option Profit"
Security	The security name
Category	Tax: Investment Reporting
Transfer	Investment: Options Profits
Amount	The amount of the profit

This creates a transaction that is reflected in any Income and Expense report but does not contribute to net worth.

Reports like the Net Worth, Investment Transaction report and Investment Performance report are capable of showing the transactions used here.

#### ***Using Reminders for Option Trading***

Option trading is very much a hands on activity. Transaction reminders are probably not applicable as the transactions are not repeating and the exact nature of the transaction is not know until it is exercised or it lapses.

General Reminders however may prove to be useful, for example you can set up a general reminder for the exercise date.