



Calculating 20-Day Annualized Historical Volatility

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Why This is Important

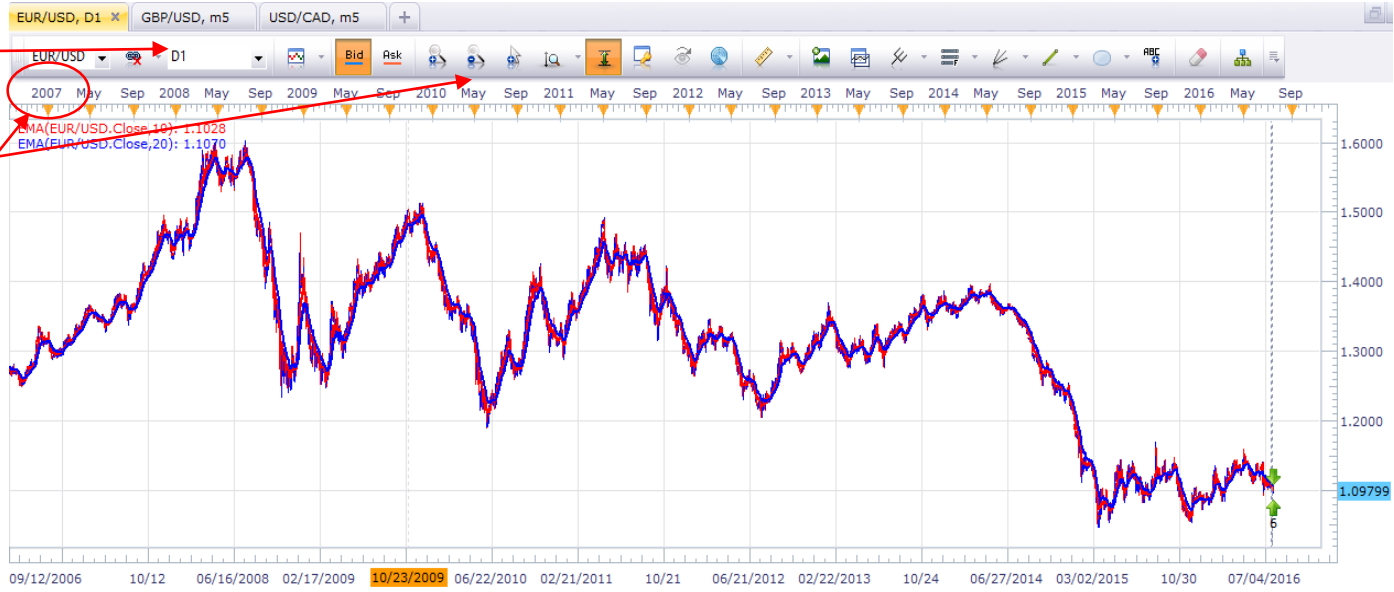
20-day annualized historical volatility can be used as a tool to help one make good trades. Calculating this allows one to see how volatile the market is throughout history. One can use this to see trends and improve their trades.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Date	EUR/USD(Open, Bid)*	EUR/USD(High, Bid)*	EUR/USD(Low, Bid)*	EUR/USD(Close, Bid)*	In Return	20 Day Vol	20 Day Annualized Vol							
2	8/29/1995	1.31301	1.31301	1.30591	1.30591										
3	8/30/1995	1.30591	1.30591	1.30381	1.30381	(0.00161)									
4	8/31/1995	1.30381	1.30981	1.30381	1.30981	0.00459									
5	9/1/1995	1.30981	1.31111	1.30981	1.31111	0.00099									
6	9/6/1995	1.31231	1.31231	1.30221	1.30221	(0.00681)									
7	9/7/1995	1.30221	1.30411	1.30221	1.30411	0.00146									
8	9/8/1995	1.30411	1.30411	1.30331	1.30331	(0.00061)									
9	9/12/1995	1.30671	1.30851	1.30671	1.30851	0.00398									
10	9/13/1995	1.30851	1.30851	1.29311	1.29311	(0.01184)									
11	9/14/1995	1.29311	1.29751	1.29311	1.29751	0.00340									
12	9/15/1995	1.29751	1.29751	1.29681	1.29681	(0.00054)									
13	9/19/1995	1.29791	1.29791	1.29741	1.29741	0.00046									
14	9/20/1995	1.29741	1.30991	1.29741	1.30991	0.00959									
15	9/21/1995	1.30991	1.33461	1.30991	1.33461	0.01868									
16	9/22/1995	1.33461	1.34801	1.33461	1.34801	0.00999									
17	9/26/1995	1.33531	1.33941	1.33531	1.33941	(0.00640)									
18	9/27/1995	1.33941	1.33971	1.33941	1.33971	0.00022									
19	9/28/1995	1.33971	1.34491	1.33971	1.34491	0.00387									
20	9/29/1995	1.34491	1.34491	1.33901	1.33901	(0.00440)									
21	10/3/1995	1.33981	1.33981	1.32931	1.32931	(0.00727)									
22	10/4/1995	1.32931	1.33581	1.32931	1.33581	0.00488	0.69%	10.98%							
23	10/5/1995	1.33581	1.34031	1.33581	1.34031	0.00336	0.69%	10.96%							
24	10/6/1995	1.34031	1.34031	1.33871	1.33871	(0.00119)	0.69%	10.92%							
25	10/11/1995	1.34291	1.34291	1.33961	1.33961	0.00067	0.69%	10.92%							
26	10/12/1995	1.33961	1.34371	1.33961	1.34371	0.00306	0.66%	10.53%							
27	10/13/1995	1.34371	1.34371	1.33641	1.33641	(0.00545)	0.68%	10.82%							

How to Find the Data on FXCM

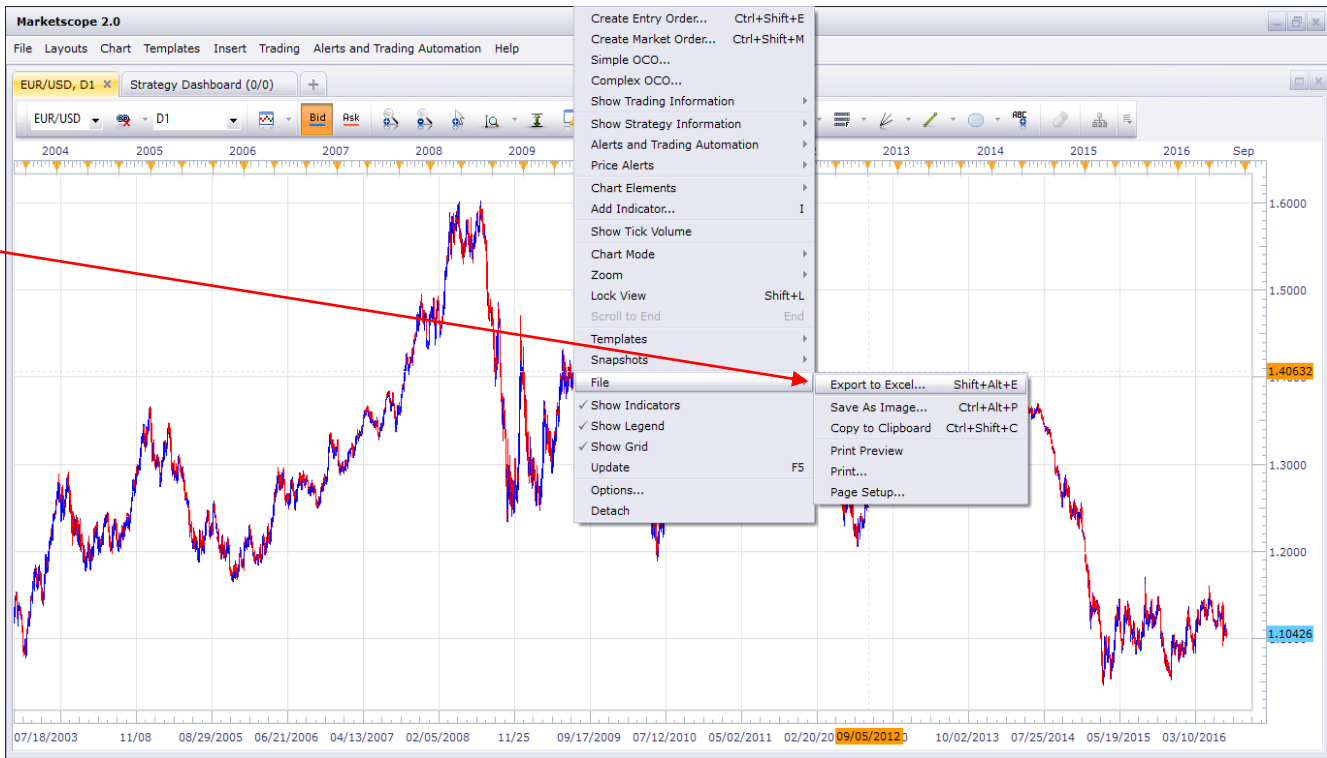
Make sure you are looking at the 1 day chart.

Click the “Zoom Out” button until you are 10 years in the past.



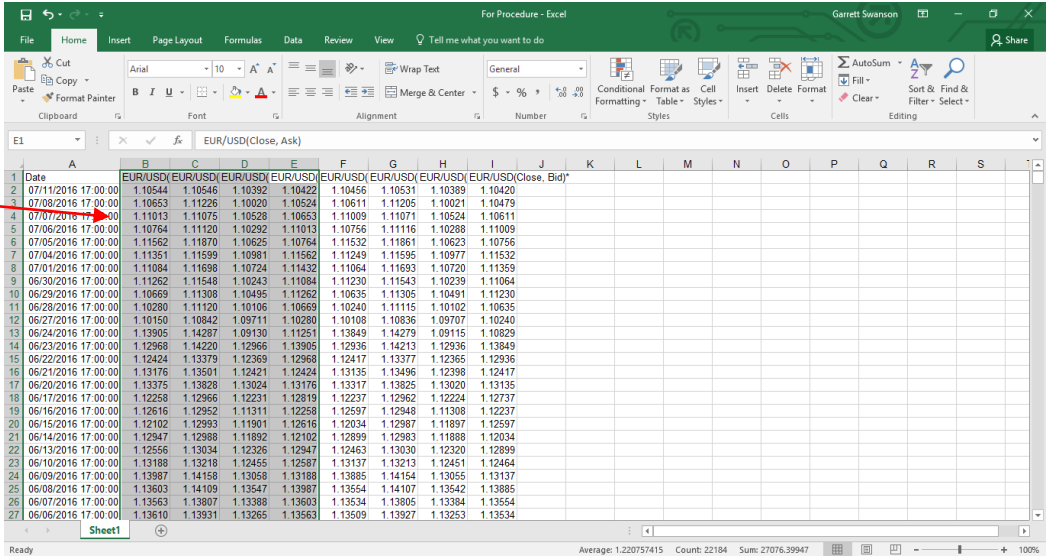
How to Export Data Into Excel

On the FXCM Marketscope, right click on the graph. Scroll over “File”, and click on “Export to Excel.”

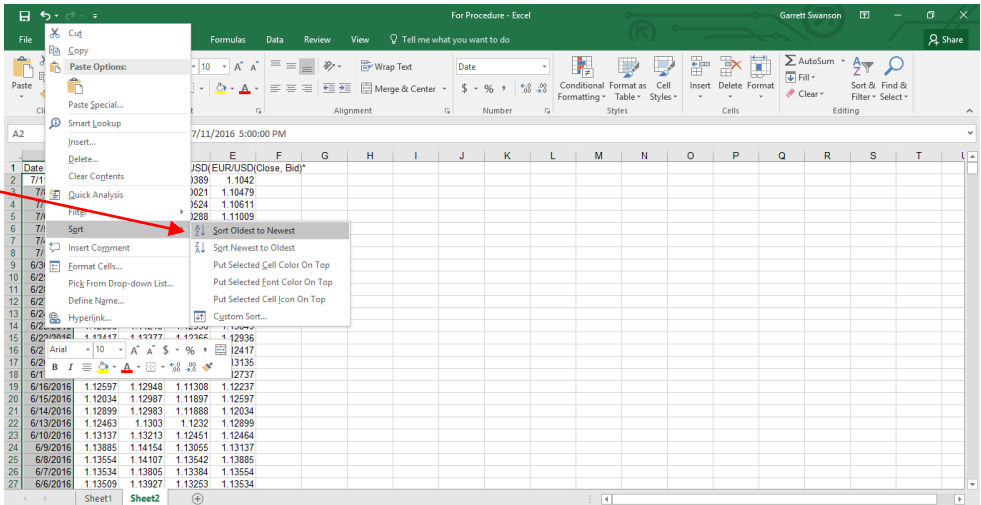


How to Prepare The Spreadsheet

Highlight all of the "Date." prices. Delete these columns.



Highlight all of the "Date." Right click on them. Scroll over "Sort" and click "Sort Oldest to Newest."



How to Find the Natural Log of Return

In the next column, go to the second day. Type =ln(

Then click on the second day close price and divide it by the first day close price.

Double click on the square on the bottom right of the cell to copy the formula all the way down.

	A	B	C	D	E	F
1	Date	EUR/USD	EUR/USD	EUR/USD	EUR/USD	ln Return
2	5/11/1993	1.24131	1.24131	1.23771	1.23771	
3	5/12/1993	1.23771	1.23771	1.23541	1.23541	=LN(E3/E2)
4	5/13/1993	1.23541	1.23541	1.22261	1.22261	
5	5/14/1993	1.22261	1.23461	1.22261	1.23461	
6	5/18/1993	1.22651	1.22651	1.22041	1.22041	
7	5/19/1993	1.22041	1.22271	1.22041	1.22271	
8	5/20/1993	1.22271	1.23151	1.22271	1.23151	
9	5/21/1993	1.23151	1.23151	1.22251	1.22251	
10	5/25/1993	1.21511	1.22101	1.21511	1.22101	
11	5/26/1993	1.22101	1.22101	1.21491	1.21491	
12	5/27/1993	1.21491	1.22591	1.21491	1.22591	
13	5/28/1993	1.22591	1.24331	1.22591	1.24331	
14	6/2/1993	1.24001	1.24001	1.23801	1.23801	
15	6/3/1993	1.23801	1.23801	1.23621	1.23621	
16	6/4/1993	1.23621	1.23621	1.21711	1.21711	
17	6/8/1993	1.22381	1.22381	1.22281	1.22281	
18	6/9/1993	1.22281	1.22281	1.21411	1.21411	
19	6/10/1993	1.21411	1.21571	1.21411	1.21571	
20	6/11/1993	1.21571	1.22421	1.21571	1.22421	
21	6/15/1993	1.22191	1.22191	1.21201	1.21201	
22	6/16/1993	1.21201	1.21201	1.19801	1.19801	
23	6/17/1993	1.19801	1.19951	1.19801	1.19951	
24	6/18/1993	1.19951	1.19951	1.18331	1.18331	
25	6/22/1993	1.17841	1.17841	1.17391	1.17391	
26	6/23/1993	1.17391	1.17781	1.17391	1.17781	
27	6/24/1993	1.17781	1.17781	1.16421	1.16421	

How to Calculate the 20 Day Volatility

In the next column, go to the 21st day. Type **=STDEV(**

Then Highlight the first 20 “ln Return.”

Copy the formula down by clicking on the square on the bottom right of the cell.

Format the cells to a percent.

	A	B	C	D	E	F	G	H
1	Date	EUR/USD	EUR/USD	EUR/USD	EUR/USD	ln Return	20 Day Volatility	
2	5/11/1993	1.24131	1.24131	1.23771	1.23771			
3	5/12/1993	1.23771	1.23771	1.23541	1.23541	-0.00186		
4	5/13/1993	1.23541	1.23541	1.22261	1.22261	-0.01041		
5	5/14/1993	1.22261	1.23461	1.22261	1.23461	0.009767		
6	5/18/1993	1.22651	1.22651	1.22041	1.22041	-0.01157		
7	5/19/1993	1.22041	1.22271	1.22041	1.22271	0.001883		
8	5/20/1993	1.22271	1.23151	1.22271	1.23151	0.007171		
9	5/21/1993	1.23151	1.23151	1.22251	1.22251	-0.00733		
10	5/25/1993	1.21511	1.22101	1.21511	1.22101	-0.00123		
11	5/26/1993	1.22101	1.22101	1.21491	1.21491	-0.00501		
12	5/27/1993	1.21491	1.22591	1.21491	1.22591	0.009013		
13	5/28/1993	1.22591	1.24331	1.22591	1.24331	0.014094		
14	6/2/1993	1.24001	1.24001	1.23801	1.23801	-0.00427		
15	6/3/1993	1.23801	1.23801	1.23621	1.23621	-0.00146		
16	6/4/1993	1.23621	1.23621	1.21711	1.21711	-0.01557		
17	6/8/1993	1.22381	1.22381	1.22281	1.22281	0.004672		
18	6/9/1993	1.22281	1.22281	1.21411	1.21411	-0.00714		
19	6/10/1993	1.21411	1.21571	1.21411	1.21571	0.001317		
20	6/11/1993	1.21571	1.22421	1.21571	1.22421	0.006967		
21	6/15/1993	1.22191	1.22191	1.21201	1.21201	-0.01002		
22	6/16/1993	1.21201	1.21201	1.19801	1.19801	-0.01162	=STDEV(F3:F22)	
23	6/17/1993	1.19801	1.19951	1.19801	1.19951	0.001251		
24	6/18/1993	1.19951	1.19951	1.18331	1.18331	-0.0136		
25	6/22/1993	1.17841	1.17841	1.17391	1.17391	-0.00798		
26	6/23/1993	1.17391	1.17781	1.17391	1.17781	0.003317		
27	6/24/1993	1.17781	1.17781	1.16421	1.16421	-0.01161		

How to Calculate 20 Day Annualized Volatility

In the next column, go to the 21st day. Type **=SQRT(252)***. 252 is for the number of trading days in a year.

Then click on the first 20 Day Volatility percent.

Copy the formula down by clicking on the square on the bottom right of the cell.

Format the cells to a percent.

	A	B	C	D	E	F	G	H	I
1	Date	EUR/USD	EUR/USD	EUR/USD	EUR/USD	In Return	20 Day	20 Day Annualized	
2	5/11/1993	1.24131	1.24131	1.23771	1.23771				
3	5/12/1993	1.23771	1.23771	1.23541	1.23541	-0.00186			
4	5/13/1993	1.23541	1.23541	1.22261	1.22261	-0.01041			
5	5/14/1993	1.22261	1.23461	1.22261	1.23461	0.009767			
6	5/18/1993	1.22651	1.22651	1.22041	1.22041	-0.01157			
7	5/19/1993	1.22041	1.22271	1.22041	1.22271	0.001883			
8	5/20/1993	1.22271	1.23151	1.22271	1.23151	0.007171			
9	5/21/1993	1.23151	1.23151	1.22251	1.22251	-0.00733			
10	5/25/1993	1.21511	1.22101	1.21511	1.22101	-0.00123			
11	5/26/1993	1.22101	1.22101	1.21491	1.21491	-0.00501			
12	5/27/1993	1.21491	1.22591	1.21491	1.22591	0.009013			
13	5/28/1993	1.22591	1.24331	1.22591	1.24331	0.014094			
14	6/2/1993	1.24001	1.24001	1.23801	1.23801	-0.00427			
15	6/3/1993	1.23801	1.23801	1.23621	1.23621	-0.00146			
16	6/4/1993	1.23621	1.23621	1.21711	1.21711	-0.01557			
17	6/8/1993	1.22381	1.22381	1.22281	1.22281	0.004672			
18	6/9/1993	1.22281	1.22281	1.21411	1.21411	-0.00714			
19	6/10/1993	1.21411	1.21571	1.21411	1.21571	0.001317			
20	6/11/1993	1.21571	1.22421	1.21571	1.22421	0.006967			
21	6/15/1993	1.22191	1.22191	1.21201	1.21201	0.01002			
22	6/16/1993	1.21201	1.21201	1.19801	1.19801	-0.01162	0.83%	=G22*SQRT(252)	
23	6/17/1993	1.19801	1.19951	1.19801	1.19951	0.001251	0.84%		
24	6/18/1993	1.19951	1.19951	1.18331	1.18331	-0.0136	0.86%		
25	6/22/1993	1.17841	1.17841	1.17391	1.17391	-0.00798	0.83%		
26	6/23/1993	1.17391	1.17781	1.17391	1.17781	0.003317	0.81%		
27	6/24/1993	1.17781	1.17781	1.16421	1.16421	-0.01161	0.83%		

The Final Product

The final product shows the 20 day annualized historical volatility. This will be used to find the volatility in the past to find a trend.

	A	B	C	D	E	F	G	H	I	J	K
1	Date	EUR/USD	EUR/USD	EUR/USD	EUR/USD	In Return	20 Day	20 Day Annualized			
2	5/11/1993	1.24131	1.24131	1.23771	1.23771						
3	5/12/1993	1.23771	1.23771	1.23541	1.23541	-0.00186					
4	5/13/1993	1.23541	1.23541	1.22261	1.22261	-0.01041					
5	5/14/1993	1.22261	1.23461	1.22261	1.23461	0.009767					
6	5/18/1993	1.22651	1.22651	1.22041	1.22041	-0.01157					
7	5/19/1993	1.22041	1.22271	1.22041	1.22271	0.001883					
8	5/20/1993	1.22271	1.23151	1.22271	1.23151	0.007171					
9	5/21/1993	1.23151	1.23151	1.22251	1.22251	-0.00733					
10	5/25/1993	1.21511	1.22101	1.21511	1.22101	-0.00123					
11	5/26/1993	1.22101	1.22101	1.21491	1.21491	-0.00501					
12	5/27/1993	1.21491	1.22591	1.21491	1.22591	0.009013					
13	5/28/1993	1.22591	1.24331	1.22591	1.24331	0.014094					
14	6/2/1993	1.24001	1.24001	1.23801	1.23801	-0.00427					
15	6/3/1993	1.23801	1.23801	1.23621	1.23621	-0.00146					
16	6/4/1993	1.23621	1.23621	1.21711	1.21711	-0.01557					
17	6/8/1993	1.22381	1.22381	1.22281	1.22281	0.004672					
18	6/9/1993	1.22281	1.22281	1.21411	1.21411	-0.00714					
19	6/10/1993	1.21411	1.21571	1.21411	1.21571	0.001317					
20	6/11/1993	1.21571	1.22421	1.21571	1.22421	0.006967					
21	6/15/1993	1.22191	1.22191	1.21201	1.21201	-0.01002					
22	6/16/1993	1.21201	1.21201	1.19801	1.19801	-0.01162	0.83%	13.25%			
23	6/17/1993	1.19801	1.19951	1.19801	1.19951	0.001251	0.84%	13.29%			
24	6/18/1993	1.19951	1.19951	1.18331	1.18331	-0.0136	0.86%	13.62%			
25	6/22/1993	1.17841	1.17841	1.17391	1.17391	-0.00798	0.83%	13.10%			
26	6/23/1993	1.17391	1.17781	1.17391	1.17781	0.003317	0.81%	12.80%			
27	6/24/1993	1.17781	1.17781	1.16421	1.16421	-0.01161	0.83%	13.17%			