



How to calculate coefficient of variation in Excel

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The coefficient of variation measures the risk/reward trade-off for different assets. This means you need to understand the risk (*standard deviation*) and the reward (*the sample mean*) within the set of data.

To calculate the CV in Excel, you need to first calculate the standard deviation and average for the data points. From there, you can easily calculate the coefficient of variation.

After you've set up your data, you can use the **=STDEV.P** formula to calculate the standard deviation. In this example, you can see the standard deviation in cell **H5** is coming from the data in cells **B5: F5**.

H5

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f_x

=STDEV.P(B5:F5)

	A	B	C	D	E	F	G	H	I	J
1										
2	Standard Deviation and Coefficient of Variation									
3										
4										
5		1	2	3	4	5				
6		2	3	5	7	10				
7		75	76	80	82	83				
8		105	107	108	115	121				

Standard Dev	Average (Mean)	CV
2.9	5.4	0.53
3.2	79.2	0.04
5.9	111.2	0.05

2

Next, you need to calculate the average of each set of data. Here you can use the **=AVERAGE** formula in excel. In this example, you can see that you calculate the average in cell I5 from the data in cells **B5: F5**.

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f_x

=AVERAGE(B5:F5)

A

B

C

D

E

F

G

H

I

J

1

2

3

4

5

6

7

8

Standard Deviation and Coefficient of Variation

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3

The final step is to calculate the coefficient of variation. Here you simply divide the standard deviation by the average return (=H5/I5). You can see the **CV** in cell **J5** comes from the data in cells **H5** and **I5**.

J5											
	A	B	C	D	E	F	G	H	I	J	
1											
2											
3											
4											
5											
6											
7											
8											

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