```mathematica
hedge = Flatten[Import["c:\\book1.txt", "Table"], 1];

Length[hedge]
```
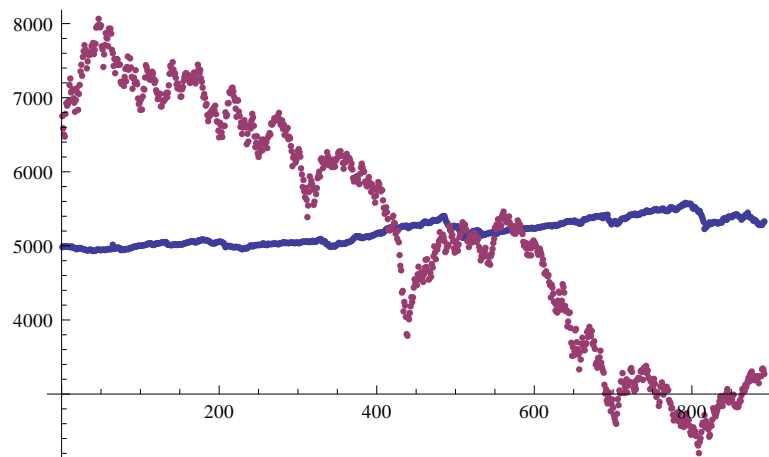
892

```mathematica
g = FinancialData["DAX", "1.1.2000"];

dax = Transpose[g][[2]][[1 ;; Length[hedge]]];

ListPlot[{hedge, dax}]
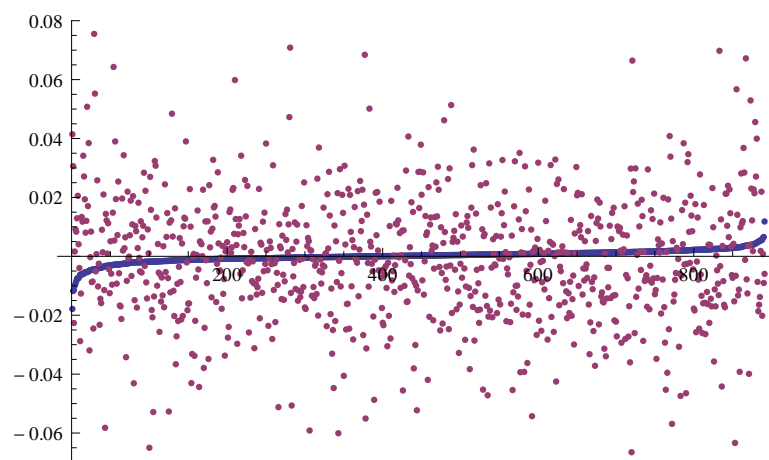```



```mathematica
hedge = Log[hedge]; dax = Log[dax];

hedge = Differences[hedge];

dax = Differences[dax];

w = Transpose[{hedge, dax}];

w = Sort[w, #1[[1]] < #2[[1]] &];

ListPlot[Transpose[w], PlotRange → All]
```

```
nN = 20; wN = Length[hedge];
m0 = Min[Transpose[w][[1]]]
Max[Transpose[w][[1]]]
m1 = Min[Transpose[w][[2]]]
Max[Transpose[w][[2]]]
f0 = (nN - 1) / (Max[Transpose[w][[1]]] - m0)
f1 = (nN - 1) / (Max[Transpose[w][[2]]] - m1)
d = 1 / wN // N
```
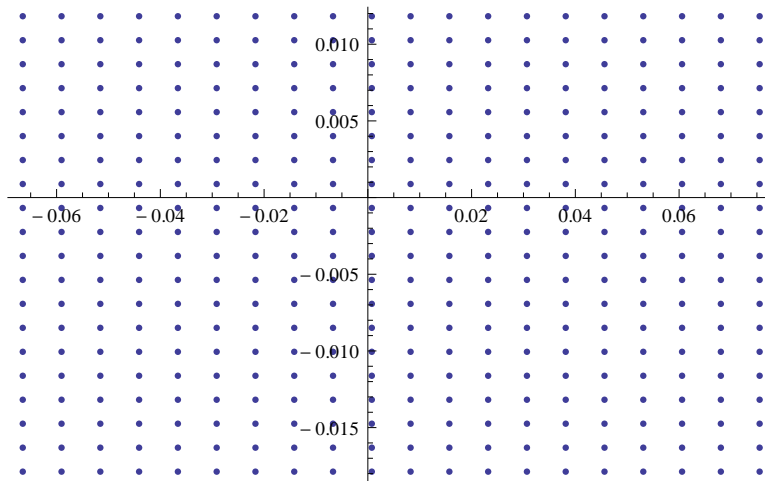
-0.0178719

0.0118256

-0.0665223

0.0755268

639.785

133.757

0.00112233

```
F[[1, 1]]
```

{-0.0665223, -0.0178719, 0}

```
ListPlot[Transpose[Transpose[Q][[1 ;; 2]]]]
```



```
w[[1]]
```
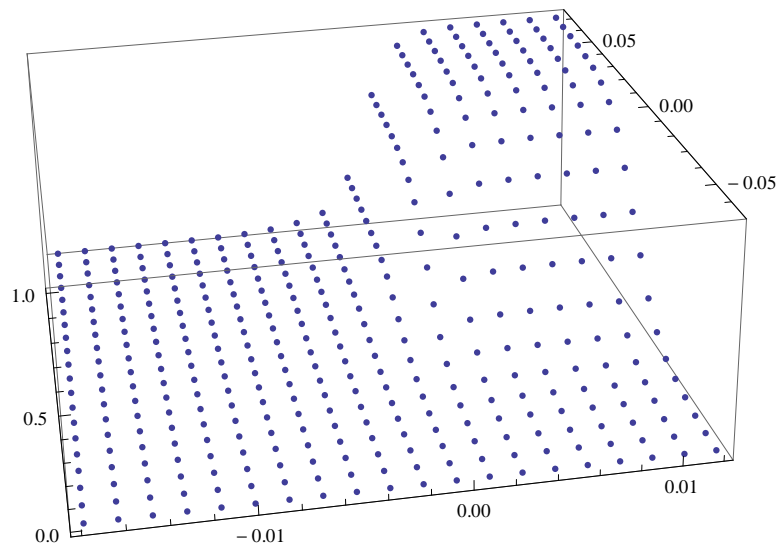
{0.041439, -0.0178719}

```
F = Table[{m0 + i / f0, m1 + j / f1, 0}, {i, 0, nN - 1}, {j, 0, nN - 1}]; For[i = 1, i ≤ nN, i++,
 For[j = 1, j ≤ nN, j++,
  For[k = 1, k ≤ wN, k++,
   If[w[[k, 2]] ≤ F[[i, j, 2]] && w[[k, 1]] ≤ F[[i, j, 1]] , F[[i, j, 3]] += d;];
  ]
 ]]; Q = Flatten[F, 1];
```
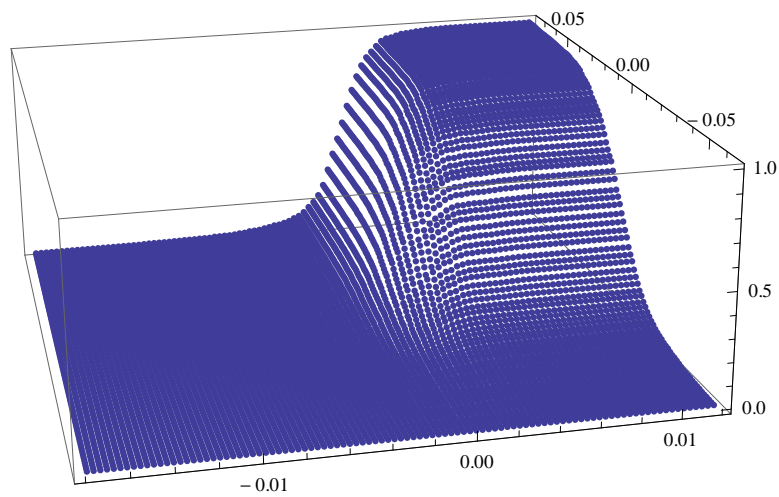
```
ListPointPlot3D[Q]
```



```
w = Import["c:\\bivariat.txt", "Table"];
```

```
ListPointPlot3D[w]
```



```
w[[3]]
```
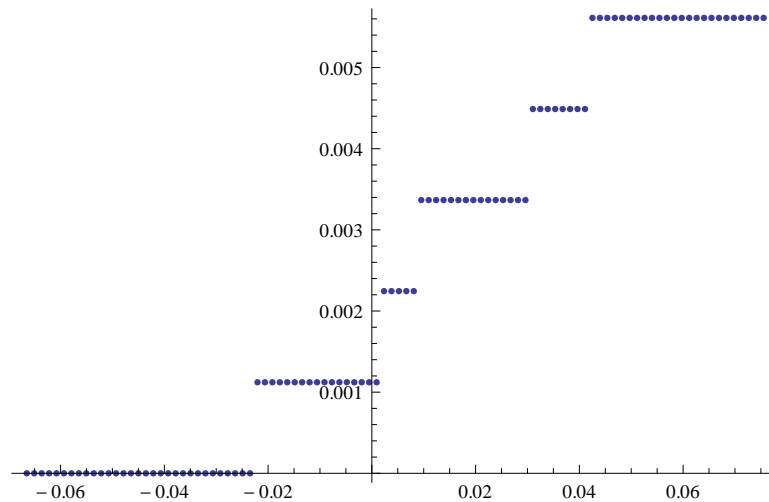
{-0.017872, -0.063653, 0.}

```
Length[w]
```

10 000

```
w[[1000, 2]]
```
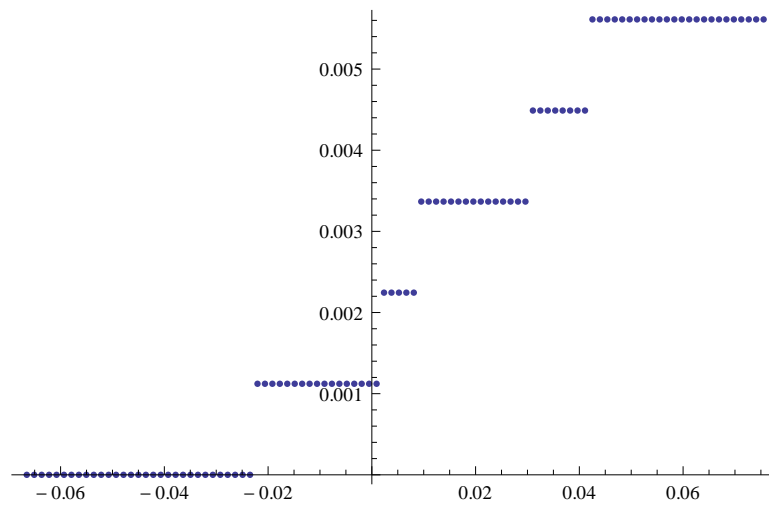
0.075527

```
Table[p, {p, 1, 9999, 1000}]
```

{1, 1001, 2001, 3001, 4001, 5001, 6001, 7001, 8001, 9001}

```
p = 3000; ListPlot[{#[[2]], #[[3]]} & /@ Select[w, #[[1]] == w[[p, 1]] &]]
```



```
ll = {#[[2]], #[[3]]} & /@ Select[w, #[[1]] == w[[p, 1]] &];
```

```
ListPlot[ll]
```



```
Max[Table[w[[k, 3]] - Q[[k, 3]], {k, nN ^ 2}]]
```

4.74747×10^{-7}