

## Pražské pivovary

Datum	Kurz	Zmena
4/26/2002	26.56	0.00%
4/25/2002	26.56	0.00%
4/24/2002	26.56	0.00%
4/23/2002	26.56	0.00%
4/22/2002	26.56	0.00%
4/19/2002	26.56	0.00%
4/18/2002	26.56	0.00%
4/17/2002	26.56	0.00%
4/16/2002	26.56	0.00%
4/15/2002	26.56	0.00%
4/12/2002	26.56	0.00%
4/11/2002	26.56	0.00%
4/10/2002	26.56	0.00%
4/9/2002	26.56	0.00%
4/5/2002	26.56	0.00%
4/4/2002	26.56	0.00%
4/3/2002	26.56	0.00%
4/2/2002	26.56	0.00%
3/29/2002	26.56	4.98%
3/28/2002	25.30	4.98%
3/27/2002	24-Oct	4.97%
3/26/2002	22.96	0.00%
3/25/2002	22.96	0.00%
3/22/2002	22.96	0.00%
3/21/2002	22.96	0.00%
3/20/2002	22.96	4.98%
3/19/2002	21.87	0.00%
3/18/2002	21.87	0.00%
3/15/2002	21.87	0.00%
3/14/2002	21.87	0.00%
3/13/2002	21.87	0.00%
3/12/2002	21.87	4.99%
3/11/2002	20.83	4.99%
3/8/2002	19.84	0.00%
3/7/2002	19.84	0.00%
3/6/2002	19.84	0.00%
3/5/2002	19.84	0.00%
3/4/2002	19.84	0.00%
3/1/2002	19.84	0.00%
2/28/2002	19.84	0.00%
2/27/2002	19.84	0.00%
2/26/2002	19.84	0.00%
2/25/2002	19.84	0.00%
2/22/2002	19.84	4.97%
2/20/2002	18.00	0.00%
2/19/2002	18.00	0.00%
2/18/2002	18.00	0.00%
2/15/2002	18.00	0.00%
2/14/2002	18.00	0.00%
2/13/2002	18.00	0.00%
2/12/2002	18.00	0.00%
2/11/2002	18.00	0.00%
2/8/2002	18.00	0.00%

## Živnobanka

Datum	Kurz	Zmena
4/26/2002	665.00	0.00%
4/25/2002	665.00	0.00%
4/24/2002	665.00	0.00%
4/23/2002	665.00	0.00%
4/22/2002	665.00	0.00%
4/19/2002	665.00	0.00%
4/18/2002	665.00	0.00%
4/17/2002	665.00	0.00%
4/16/2002	665.00	0.00%
4/15/2002	665.00	0.00%
4/12/2002	665.00	0.00%
4/11/2002	665.00	0.00%
4/10/2002	665.00	0.00%
4/9/2002	665.00	0.00%
4/5/2002	665.00	0.00%
4/4/2002	665.00	0.00%
4/3/2002	665.00	0.00%
4/2/2002	665.00	0.00%
3/29/2002	665.00	1.53%
3/28/2002	655.00	0.77%
3/27/2002	650.00	0.62%
3/26/2002	646.00	0.47%
3/25/2002	643.00	0.47%
3/22/2002	640.00	0.79%
3/21/2002	635.00	0.00%
3/20/2002	635.00	-2.31%
3/19/2002	650.00	0.00%
3/18/2002	650.00	3.34%
3/15/2002	629.00	0.00%
3/14/2002	629.00	-2.47%
3/13/2002	644.90	2.37%
3/12/2002	630.00	-1.56%
3/11/2002	640.00	1.59%
3/8/2002	630.00	-0.79%
3/7/2002	635.00	0.00%
3/6/2002	635.00	0.00%
3/5/2002	635.00	-0.78%
3/4/2002	640.00	0.79%
3/1/2002	635.00	0.00%
2/28/2002	635.00	0.00%
2/27/2002	635.00	0.00%
2/26/2002	635.00	-0.78%
2/25/2002	640.00	0.00%
2/22/2002	640.00	0.00%
2/20/2002	640.00	0.00%
2/19/2002	640.00	-0.16%
2/18/2002	641.00	0.16%
2/15/2002	640.00	0.00%
2/14/2002	640.00	0.00%
2/13/2002	640.00	0.00%
2/12/2002	640.00	-0.78%
2/11/2002	645.00	0.00%
2/8/2002	645.00	0.00%

2/7/2002	18.00	0.00%
2/6/2002	18.00	0.00%
2/5/2002	18.00	0.00%
2/4/2002	18.00	0.00%
2/1/2002	18.00	0.00%
1/31/2002	18.00	0.00%
1/30/2002	18.00	0.00%
1/29/2002	18.00	0.00%
1/28/2002	18.00	0.00%
1/25/2002	18.00	0.00%
1/24/2002	18.00	0.00%
1/23/2002	18.00	0.00%
1/22/2002	18.00	0.00%
1/21/2002	18.00	0.00%
1/18/2002	18.00	0.00%
1/17/2002	18.00	0.00%
1/16/2002	18.00	0.00%
1/15/2002	18.00	0.00%
1/14/2002	18.00	0.00%
1/11/2002	18.00	0.00%
1/10/2002	18.00	0.00%
1/9/2002	18.00	0.00%
1/8/2002	18.00	0.00%
1/7/2002	18.00	0.00%

2/7/2002	645.00	-1.53%
2/6/2002	655.00	0.00%
2/5/2002	655.00	2.34%
2/4/2002	640.00	-0.16%
2/1/2002	641.00	-2.58%
1/31/2002	658.00	0.84%
1/30/2002	652.50	-1.06%
1/29/2002	659.50	0.09%
1/28/2002	658.90	-0.02%
1/25/2002	659.00	0.00%
1/24/2002	659.00	0.61%
1/23/2002	655.00	0.00%
1/22/2002	655.00	-0.15%
1/21/2002	656.00	0.61%
1/18/2002	652.00	0.00%
1/17/2002	652.00	1.88%
1/16/2002	640.00	-2.14%
1/15/2002	654.00	-0.46%
1/14/2002	657.00	0.46%
1/11/2002	654.00	0.62%
1/10/2002	650.00	-1.50%
1/9/2002	659.90	0.00%
1/8/2002	659.90	4.41%
1/7/2002	632.00	-4.24%

## ČEZ

Datum	Kurz	Zmena
4/26/2002	81.34	0.77%
4/25/2002	80.72	0.19%
4/24/2002	80.57	-0.98%
4/23/2002	81.37	0.47%
4/22/2002	80.99	-0.10%
4/19/2002	81.07	0.41%
4/18/2002	80.74	-1.40%
4/17/2002	81.89	0.70%
4/16/2002	81.32	0.22%
4/15/2002	81.14	0.31%
4/12/2002	80.89	-0.01%
4/11/2002	80.90	-3.46%
4/10/2002	83.80	-0.64%
4/9/2002	84.34	3.31%
4/5/2002	80.49	0.37%
4/4/2002	80.19	1.78%
4/3/2002	78.79	2.07%
4/2/2002	77.19	0.78%
3/29/2002	76.59	-0.01%
3/28/2002	76.60	2.79%
3/27/2002	74.52	0.13%
3/26/2002	74.42	-0.23%
3/25/2002	74.59	1.02%
3/22/2002	73.84	-0.42%
3/21/2002	74.15	0.20%
3/20/2002	74.00	0.14%
3/19/2002	73.90	-3.71%

## Česká pojišťovna

Datum	Kurz	Zmena
4/26/2002	4158	8.00%
4/25/2002	3850	0.00%
4/24/2002	3850	0.00%
4/23/2002	3850	0.00%
4/22/2002	3850	0.00%
4/19/2002	3850	0.00%
4/18/2002	3850	1.32%
4/17/2002	3800	0.00%
4/16/2002	3800	3.40%
4/15/2002	3675	5.00%
4/12/2002	3500	0.00%
4/11/2002	3500	0.00%
4/10/2002	3500	0.00%
4/9/2002	3500	0.00%
4/5/2002	3500	0.00%
4/4/2002	3500	0.00%
4/3/2002	3500	0.00%
4/2/2002	3500	0.00%
3/29/2002	3500	0.00%
3/28/2002	3500	0.00%
3/27/2002	3500	0.00%
3/26/2002	3500	0.00%
3/25/2002	3500	0.00%
3/22/2002	3500	0.00%
3/21/2002	3500	0.00%
3/20/2002	3500	0.00%
3/19/2002	3500	0.00%

3/18/2002	76.75	1.32%
3/15/2002	75.75	-1.24%
3/14/2002	76.70	-3.88%
3/13/2002	79.80	1.17%
3/12/2002	78.88	-3.63%
3/11/2002	81.85	1.25%
3/8/2002	80.84	1.81%
3/7/2002	79.40	1.60%
3/6/2002	78.15	2.04%
3/5/2002	76.59	2.99%
3/4/2002	74.37	2.10%
3/1/2002	72.84	-1.02%
2/28/2002	73.59	0.00%
2/27/2002	73.59	1.24%
2/26/2002	72.69	1.30%
2/25/2002	71.76	1.59%
2/22/2002	70.64	-0.28%
2/20/2002	73.98	1.89%
2/19/2002	72.61	0.79%
2/18/2002	72.04	0.91%
2/15/2002	71.39	-6.40%
2/14/2002	76.27	-3.92%
2/13/2002	79.38	1.20%
2/12/2002	78.44	-0.08%
2/11/2002	78.50	-1.74%
2/8/2002	79.89	2.88%
2/7/2002	77.65	-1.82%
2/6/2002	79.09	-2.53%
2/5/2002	81.14	0.12%
2/4/2002	81.04	-0.07%
2/1/2002	81.10	-1.40%
1/31/2002	82.25	3.38%
1/30/2002	79.56	0.39%
1/29/2002	79.25	-0.03%
1/28/2002	79.27	0.47%
1/25/2002	78.90	-0.18%
1/24/2002	79.04	0.64%
1/23/2002	78.54	2.24%
1/22/2002	76.82	1.63%
1/21/2002	75.59	0.45%
1/18/2002	75.25	-2.45%
1/17/2002	77.14	-0.06%
1/16/2002	77.19	-1.97%
1/15/2002	78.74	-2.37%
1/14/2002	80.65	-2.64%
1/11/2002	82.84	3.18%
1/10/2002	80.29	3.20%
1/9/2002	77.80	3.60%
1/8/2002	75.10	-1.77%
1/7/2002	76.45	0.26%

3/18/2002	3500	0.00%
3/15/2002	3500	-2.78%
3/14/2002	3600	0.00%
3/13/2002	3600	0.00%
3/12/2002	3600	0.00%
3/11/2002	3600	-7.67%
3/8/2002	3899	0.00%
3/7/2002	3899	0.00%
3/6/2002	3899	0.00%
3/5/2002	3899	0.00%
3/4/2002	3899	1.27%
3/1/2002	3850	0.00%
2/28/2002	3850	6.94%
2/27/2002	3600	0.00%
2/26/2002	3600	0.00%
2/25/2002	3600	0.00%
2/22/2002	3600	0.00%
2/20/2002	3600	0.00%
2/19/2002	3600	0.00%
2/18/2002	3600	0.00%
2/15/2002	3600	0.00%
2/14/2002	3600	0.00%
2/13/2002	3600	0.00%
2/12/2002	3600	-1.88%
2/11/2002	3669	0.00%
2/8/2002	3669	0.00%
2/7/2002	3669	0.00%
2/6/2002	3669	-5.00%
2/5/2002	3862	10.22%
2/4/2002	3504	13.36%
2/1/2002	3091	0.00%
1/31/2002	3091	4.99%
1/30/2002	2944	0.00%
1/29/2002	2944	-8.00%
1/28/2002	3200	0.00%
1/25/2002	3200	0.00%
1/24/2002	3200	0.00%
1/23/2002	3200	0.00%
1/22/2002	3200	0.00%
1/21/2002	3200	0.00%
1/18/2002	3200	0.00%
1/17/2002	3200	0.00%
1/16/2002	3200	0.00%
1/15/2002	3200	7.56%
1/14/2002	2975	0.00%
1/11/2002	2975	0.00%
1/10/2002	2975	0.00%
1/9/2002	2975	0.00%
1/8/2002	2975	0.00%
1/7/2002	2975	0.00%

očekávaná měsíční výnosnost TP

PX	333.4	338.9	346.8	347.8	350.9	348.1	349.4	354.2
výnos		0.016497	0.023311	0.002884	0.008913	-0.0079795	0.003735	0.013738

Úloha:

- 1) Vypočítejte váhy cenných papírů, je-li bezrizikové aktivum 4%
- 2) Vypočítejte výnosnost a riziko portfolia, je-li zakázán prodej nakrátko a je-li povolen sell short

## Komerční banka

Datum	Kurz	Zmena
4/26/2002	1818.00	4.84%
4/25/2002	1734.00	1.52%
4/24/2002	1708.00	-0.29%
4/23/2002	1713.00	2.45%
4/22/2002	1672.00	0.54%
4/19/2002	1663.00	-3.65%
4/18/2002	1726.00	-4.27%
4/17/2002	1803.00	0.78%
4/16/2002	1789.00	-2.19%
4/15/2002	1829.00	4.87%
4/12/2002	1744.00	1.28%
4/11/2002	1722.00	-2.05%
4/10/2002	1758.00	0.92%
4/9/2002	1742.00	3.51%
4/5/2002	1637.00	3.02%
4/4/2002	1589.00	0.89%
4/3/2002	1575.00	-0.13%
4/2/2002	1577.00	-0.44%
3/29/2002	1584.00	2.13%
3/28/2002	1551.00	3.26%
3/27/2002	1502.00	-0.92%
3/26/2002	1516.00	-0.13%
3/25/2002	1518.00	-2.00%
3/22/2002	1549.00	8.40%
3/21/2002	1429.00	-0.42%
3/20/2002	1435.00	1.20%
3/19/2002	1418.00	-1.05%
3/18/2002	1433.00	0.21%
3/15/2002	1430.00	0.42%
3/14/2002	1424.00	0.64%
3/13/2002	1415.00	-0.42%
3/12/2002	1421.00	-1.11%
3/11/2002	1437.00	-0.90%
3/8/2002	1450.00	1.47%
3/7/2002	1429.00	3.48%
3/6/2002	1381.00	-1.36%
3/5/2002	1400.00	0.14%
3/4/2002	1398.00	1.16%
3/1/2002	1382.00	6.14%
2/28/2002	1302.00	1.40%
2/27/2002	1284.00	-0.16%
2/26/2002	1286.00	2.80%
2/25/2002	1251.00	0.40%
2/22/2002	1246.00	-0.40%
2/20/2002	1307.00	4.64%
2/19/2002	1249.00	1.13%
2/18/2002	1235.00	-0.88%
2/15/2002	1246.00	-1.27%
2/14/2002	1262.00	2.60%
2/13/2002	1230.00	0.82%
2/12/2002	1220.00	1.92%
2/11/2002	1197.00	-0.33%
2/8/2002	1201.00	0.17%

2/7/2002	<b>1199.00</b>	<b>-0.83%</b>
2/6/2002	<b>1209.00</b>	0.42%
2/5/2002	<b>1204.00</b>	<b>-2.03%</b>
2/4/2002	<b>1229.00</b>	<b>-1.99%</b>
2/1/2002	<b>1254.00</b>	<b>-1.34%</b>
1/31/2002	<b>1271.00</b>	2.83%
1/30/2002	<b>1236.00</b>	<b>-2.98%</b>
1/29/2002	<b>1274.00</b>	<b>-1.47%</b>
1/28/2002	<b>1293.00</b>	0.31%
1/25/2002	<b>1289.00</b>	<b>-0.77%</b>
1/24/2002	<b>1299.00</b>	3.67%
1/23/2002	<b>1253.00</b>	0.56%
1/22/2002	<b>1246.00</b>	4.36%
1/21/2002	<b>1194.00</b>	1.02%
1/18/2002	<b>1182.00</b>	0.68%
1/17/2002	<b>1174.00</b>	2.89%
1/16/2002	<b>1141.00</b>	0.88%
1/15/2002	<b>1131.00</b>	<b>-0.79%</b>
1/14/2002	<b>1140.00</b>	<b>-1.72%</b>
1/11/2002	<b>1160.00</b>	2.29%
1/10/2002	<b>1134.00</b>	1.34%
1/9/2002	<b>1119.00</b>	3.23%
1/8/2002	<b>1084.00</b>	<b>-0.82%</b>
1/7/2002	<b>1093.00</b>	1.86%

## Česká spořitelna

Datum	Kurz	Zmena
4/26/2002	<b>375.00</b>	<b>-0.03%</b>
4/25/2002	<b>375.10</b>	0.00%
4/24/2002	<b>375.10</b>	0.00%
4/23/2002	<b>375.10</b>	<b>-0.03%</b>
4/22/2002	<b>375.20</b>	0.00%
4/19/2002	<b>375.20</b>	0.03%
4/18/2002	<b>375.10</b>	<b>-0.13%</b>
4/17/2002	<b>375.60</b>	0.03%
4/16/2002	<b>375.50</b>	0.11%
4/15/2002	<b>375.10</b>	0.00%
4/12/2002	<b>375.10</b>	0.00%
4/11/2002	<b>375.10</b>	0.00%
4/10/2002	<b>375.10</b>	0.00%
4/9/2002	<b>375.10</b>	0.08%
4/5/2002	<b>374.00</b>	0.21%
4/4/2002	<b>373.20</b>	0.08%
4/3/2002	<b>372.90</b>	0.27%
4/2/2002	<b>371.90</b>	<b>-0.38%</b>
3/29/2002	<b>373.30</b>	0.27%
3/28/2002	<b>372.30</b>	0.08%
3/27/2002	<b>372.00</b>	<b>-0.27%</b>
3/26/2002	<b>373.00</b>	<b>-0.08%</b>
3/25/2002	<b>373.30</b>	<b>-1.50%</b>
3/22/2002	<b>379.00</b>	1.94%
3/21/2002	<b>371.80</b>	<b>-1.82%</b>
3/20/2002	<b>378.70</b>	<b>-0.68%</b>
3/19/2002	<b>381.30</b>	<b>-1.98%</b>

3/18/2002	<b>389.00</b>	<b>-0.21%</b>
3/15/2002	<b>389.80</b>	0.23%
3/14/2002	<b>388.90</b>	0.52%
3/13/2002	<b>386.90</b>	1.55%
3/12/2002	<b>381.00</b>	<b>-0.70%</b>
3/11/2002	<b>383.70</b>	<b>-0.62%</b>
3/8/2002	<b>386.10</b>	0.00%
3/7/2002	<b>386.10</b>	0.21%
3/6/2002	<b>385.30</b>	<b>-1.53%</b>
3/5/2002	<b>391.30</b>	0.18%
3/4/2002	<b>390.60</b>	1.19%
3/1/2002	<b>386.00</b>	0.78%
2/28/2002	<b>383.00</b>	0.52%
2/27/2002	<b>381.00</b>	6.39%
2/26/2002	<b>358.10</b>	0.84%
2/25/2002	<b>355.10</b>	2.01%
2/22/2002	<b>348.10</b>	<b>-1.36%</b>
2/20/2002	<b>360.70</b>	2.41%
2/19/2002	<b>352.20</b>	1.56%
2/18/2002	<b>346.80</b>	<b>-0.63%</b>
2/15/2002	<b>349.00</b>	<b>-0.94%</b>
2/14/2002	<b>352.30</b>	1.00%
2/13/2002	<b>348.80</b>	<b>-0.29%</b>
2/12/2002	<b>349.80</b>	3.25%
2/11/2002	<b>338.80</b>	0.83%
2/8/2002	<b>336.00</b>	<b>-0.03%</b>
2/7/2002	<b>336.10</b>	0.99%
2/6/2002	<b>332.80</b>	<b>-1.86%</b>
2/5/2002	<b>339.10</b>	0.95%
2/4/2002	<b>335.90</b>	1.48%
2/1/2002	<b>331.00</b>	1.22%
1/31/2002	<b>327.00</b>	1.08%
1/30/2002	<b>323.50</b>	<b>-0.74%</b>
1/29/2002	<b>325.90</b>	0.18%
1/28/2002	<b>325.30</b>	<b>-0.52%</b>
1/25/2002	<b>327.00</b>	<b>-1.71%</b>
1/24/2002	<b>332.70</b>	2.53%
1/23/2002	<b>324.50</b>	<b>-1.37%</b>
1/22/2002	<b>329.00</b>	6.78%
1/21/2002	<b>308.10</b>	3.25%
1/18/2002	<b>298.40</b>	<b>-0.07%</b>
1/17/2002	<b>298.60</b>	<b>-0.17%</b>
1/16/2002	<b>299.10</b>	0.03%
1/15/2002	<b>299.00</b>	<b>-0.76%</b>
1/14/2002	<b>301.30</b>	<b>-1.05%</b>
1/11/2002	<b>304.50</b>	<b>-0.52%</b>
1/10/2002	<b>306.10</b>	1.12%
1/9/2002	<b>302.70</b>	0.87%
1/8/2002	<b>300.10</b>	<b>-0.96%</b>
1/7/2002	<b>303.00</b>	1.17%

361.1	372.7	371.6	395.9	397.6	406.1	400.7	396.6	398.2
0.019481	0.032124	-0.0029514	0.065393	0.004294	0.021378	-0.0133	-0.01023	0.004034







400.9	399.1	401.1
0.006781	-0.00449	0.005011