

## Worksheet

### Comprehension questions

- 1) Anyone investing money on the capital market wants to earn the highest possible returns and suffer the lowest possible losses.  
a) Generally speaking, which can you expect to yield a higher return: shares or bonds?

- b) Generally speaking, where is the risk of losing a lot of money greater: with shares or bonds?

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- 2) Why do companies issue shares and bonds?

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- 3) What is the main difference between the status of a shareholder and the status of a bondholder vis-à-vis a company?

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- 4) A joint-stock company goes bankrupt. Proceeds remain after the liquidation. Are these proceeds used to first pay the bondholders or the shareholders (if sufficient to do so)?

- 5) Calculate the income and gains on the two following investments.
- a) A man buys 50 shares for CHF 5 each (Year 1). In the subsequent years the company pays the shareholder dividends of CHF 5 (Year 2), CHF 2 (Year 3) and CHF 8 (Year 4) on his 50 shares. After receiving the dividend in Year 4, the shareholder sells the 50 shares at a market price of CHF 4. Calculate the gain or loss he has realised and the return without compound interest.

- b) A woman buys 15 bonds at a nominal value of CHF 500 each for the price of CHF 500 per bond (Year 1). Each year she receives an interest payment of 2%, in other words CHF 10 per bond (Years 2 to 4). Immediately after receiving the interest payment in Year 4, she sells the bonds at a market price of CHF 520 each. Calculate the gain or loss she has realised and the return without compound interest.

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### Advanced questions

- 6) Lena buys a bond issued by the company Swiss E-Bike with a nominal value of CHF 1,000 on the stock exchange via her bank. The price of the bond is currently 97% and the coupon 5%. The bond matures in 6 years. The coupon is paid once a year. The last coupon was paid the day before Lena bought the bond.
- a) What purchase price does Lena have to pay for the bond with a nominal value of CHF 1,000?

- b) How much in Swiss francs is the interest (coupon) payment that Lena receives once a year?

- c) Lena suddenly needs cash. Does she now have to wait six years for the bond to be repaid on maturity, or can she convert the bond back into cash before this?

- d) Can Lena vote at the Swiss E-Bike annual general meeting?

- 7) Your cousin Mia, your uncle Tobias and your friend Sarah are considering investing their savings in shares, and ask you for advice. Assess whether investing in shares is advisable in each of their circumstances and give them your recommendation.
- a) Mia is about to finish her commercial apprenticeship. She lives in a small rented flat. She doesn't yet have a job lined up for when she finishes her apprenticeship. Mia doesn't like taking risks. She prefers to stay on the safe side. She has already saved CHF 2,000, as well as inheriting CHF 3,000 from her grandparents. So she now has a total of CHF 5,000 in her bank account that she could invest on the stock market. But it may well be that she will soon need the money for spending purposes. A friend advises her to invest all the money in shares. What do you think of this suggestion?

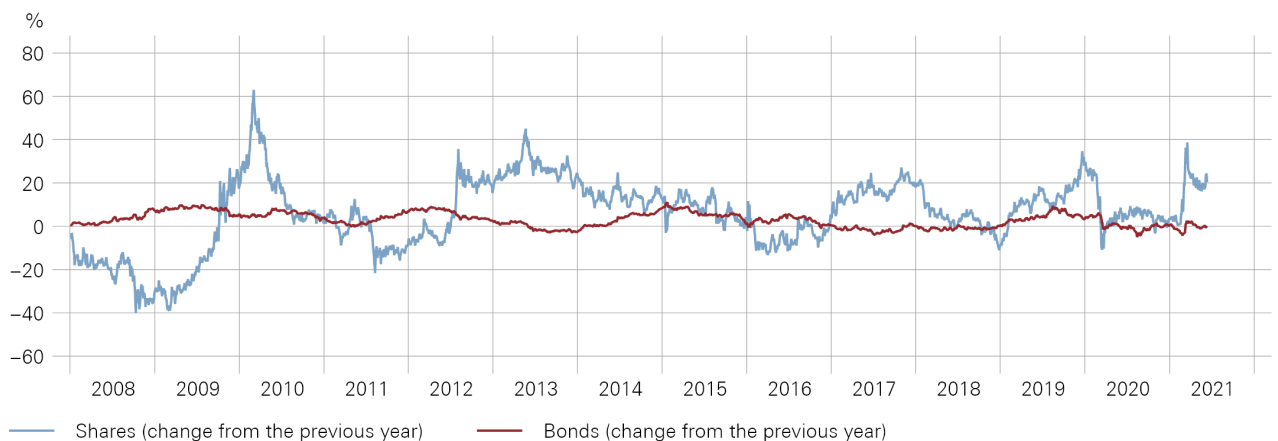
- b) Tobias is 40, and for the last five years has been an executive in a medium-sized pharmaceutical company. Over the years he's built up a small nest egg. In addition to his mandatory pension fund, he wants to profitably invest CHF 100,000 on the stock market. He's fairly sure that he won't need these savings for any purchases in the next 10 or 20 years. Tobias likes taking risks. A friend has advised him to invest his savings in shares. What do you think of this suggestion?

- c) Sarah has been given CHF 5,000 in cash for her 18th birthday. Since her income is enough to live on, she plans to invest the money for the long term. She's uncertain about whether to invest in shares. The alternative would be to put it in her savings account, but there it would earn only 0.5% interest. What do you advise her to do?

- 8) The following chart shows the annual returns on shares and bonds for the period from 2008 (start of the global financial crisis) through to mid-2021.<sup>[1]</sup> The light blue line shows the development of the returns on Swiss franc bonds. The dark blue line shows the returns on Swiss equities. The values correspond to the change compared to previous year in percent. A positive value means a gain, a negative value a loss.

Illustrative example: At the beginning of 2010, the return on shares was 20%. That means that if an investor had invested in Swiss shares at the beginning of 2009, one year later they would have made a gain of 20% on the capital they invested.

#### COMPARISON OF RETURNS ON SHARES AND BONDS



Sources: SNB, SIX

Now compare the development of the returns on shares and bonds. What is particularly noticeable?

Note: Over the period as a whole, the average annual return on shares was 5.7%, and 2.9% in the case of bonds.

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**Footnotes:**

<sup>[1]</sup> The return on shares is calculated using the Swiss All Share Index Total Return. This reflects the price development of all listed shares in Switzerland and the Principality of Liechtenstein. The bond returns are represented by the Swiss Bond Index AAA–BBB Total Return. This shows the price development of a large proportion of the exchange-traded Swiss franc bonds. Both these indices factor in dividend and coupon payments.