

# IC Capital Market Assumptions Handbook



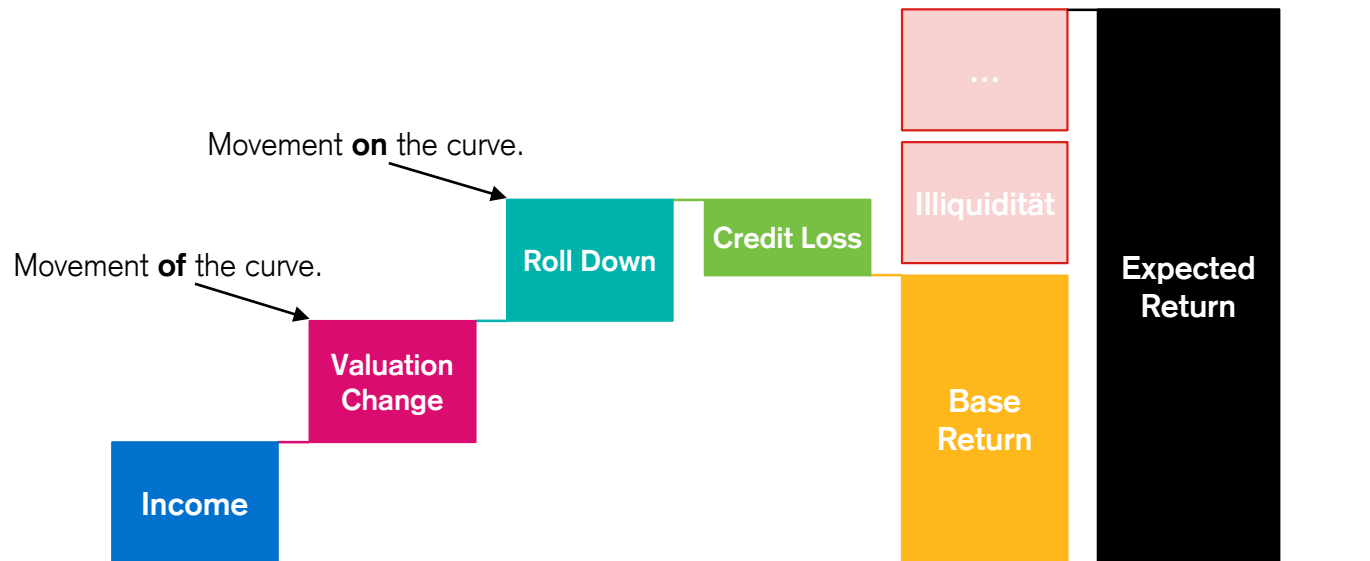
PENSIONSKASSE DER CREDIT SUISSE GROUP (SCHWEIZ)  
Investment Management  
14.02.2022

**Vertraulich**

CREDIT SUISSE 

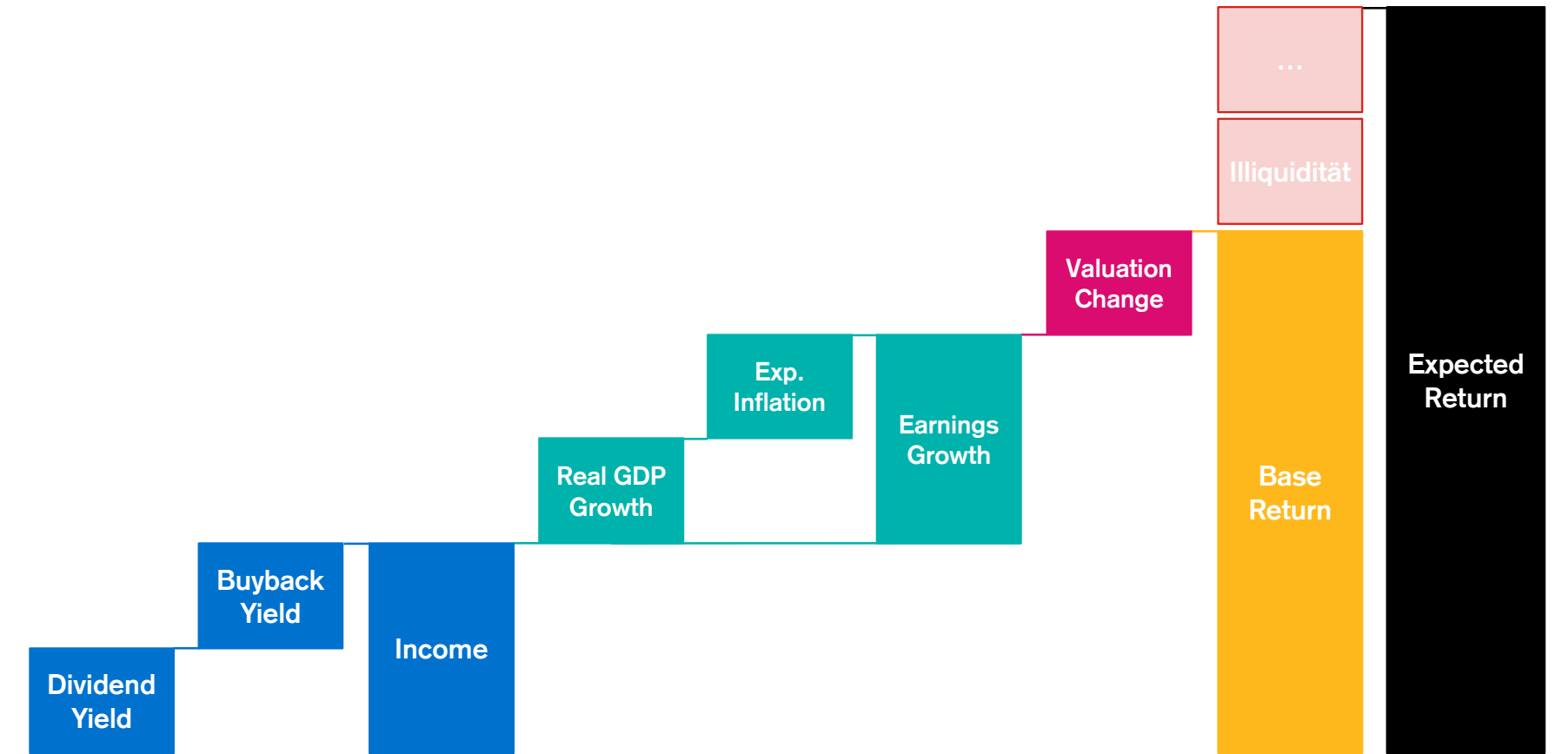
# Capital Market Assumptions

## Methodologie: Nominal Assets



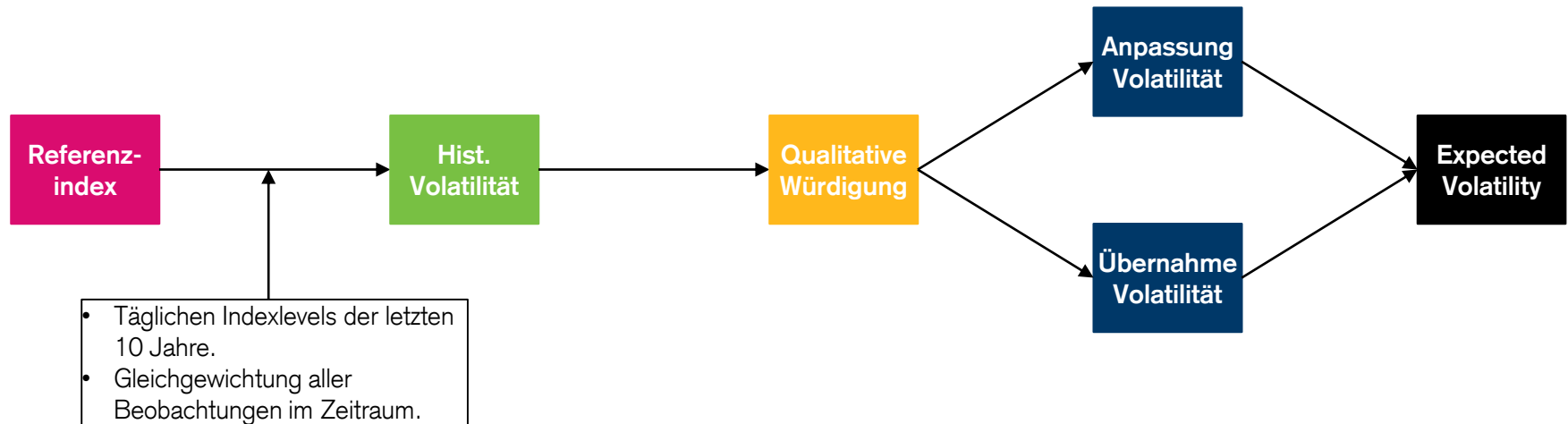
# Capital Market Assumptions

## Methodologie: Real Assets



# Capital Market Assumptions

## Methodologie: Expected Volatility



# Capital Market Assumptions

## Nominal Assets



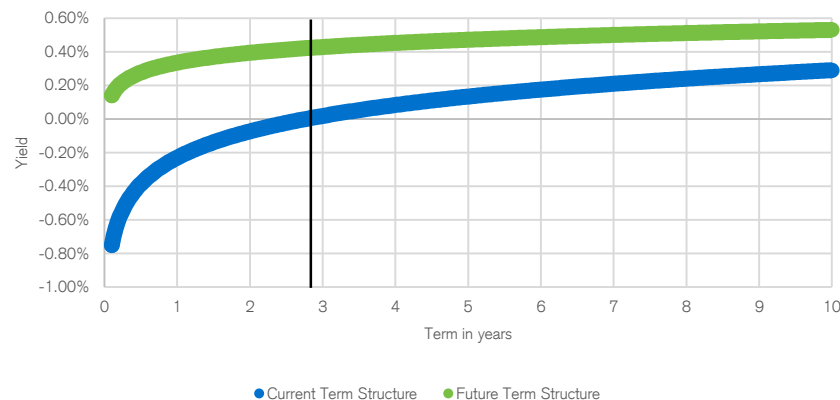
# Capital Market Assumptions

## Listed Rates CHF (1-5) – Modellierung

### Input

- Referenzindex:
  - Name: SBI 1-5 AAA-AA TR
  - Ticker: SAA15T Index
- Index Characteristics:
  - Starting Yield: 0.13%
  - Duration: 2.85
- Treasury Curve Characteristics:
  - Current Policy Rate: -0.75%
  - Future Policy Rate: 0.14% (Consensus)
  - Current 10Y Yield: 0.29%
  - Future 10Y Yield: 0.53% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(0.42\% - 0.01\%) = 0.41\%$

### Income Building Block

- Ending Yield:  $0.13\% + 0.41\% = 0.54\%$

Income Building Block:  $(0.13\% + 0.54\%) / 2 = 0.34\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 2.85 \times (0.54\% - 0.13\%)]^{1/5} - 1 = -0.23\%$

### Roll Down Building Block

- Current Term Structure:
  - 3Y Yield: 0.02%
  - 2Y Yield: -0.07%
  - Roll Down:  $(0.02\% - (-0.07\%)) \times 2.85 = 0.26\%$
- Future Term Structure:
  - 3Y Yield: 0.43%
  - 2Y Yield: 0.39%
  - Roll Down:  $(0.43\% - 0.39\%) \times 2.85 = 0.11\%$

Roll Down Building Block:  $(0.26\% + 0.11\%) / 2 = 0.19\%$

# Capital Market Assumptions

## Listed Rates CHF (1-5) – CMA

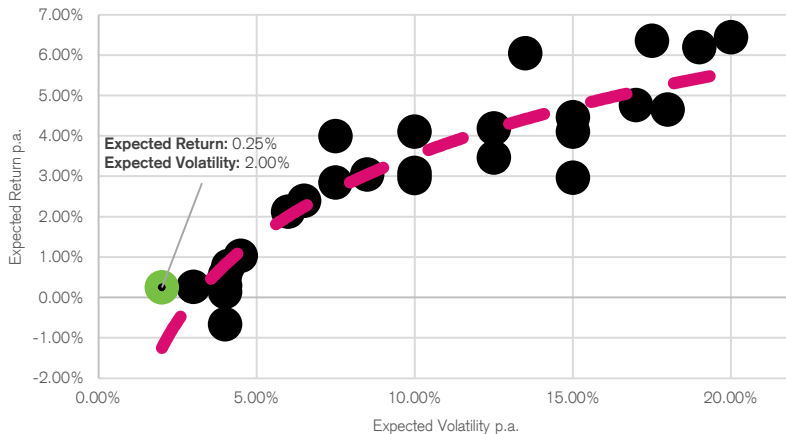
### Input

- Expected Volatility wird auf 2.00% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

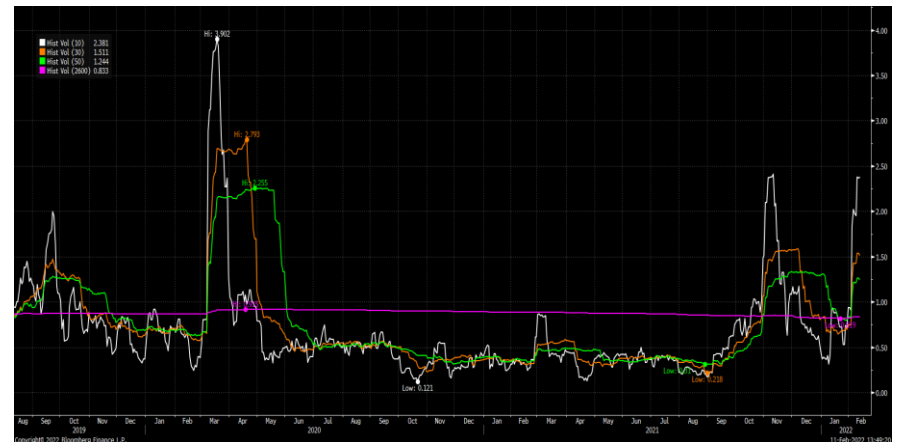
### Expected Return

0.34%	← Income
0.19%	← Roll Down
-0.23%	← Valuation
-	← Credit Loss
-	← Hedging Cost
-0.05%	← Management Fees
0.25%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 2.00%



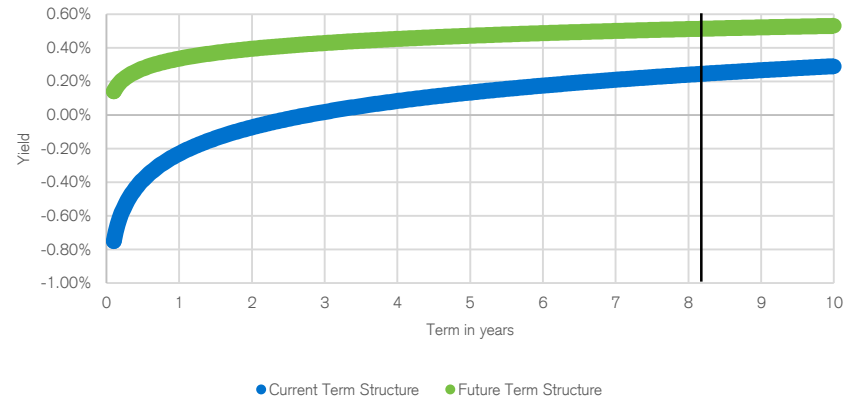
# Capital Market Assumptions

## Listed Rates CHF (all maturities) – Modellierung

### Input

- Referenzindex:
  - Name: SBI AAA-AA TR
  - Ticker: SBR12T Index
- Index Characteristics:
  - Starting Yield: 0.45%
  - Duration: 8.15
- Treasury Curve Characteristics:
  - Current Policy Rate: -0.75%
  - Future Policy Rate: 0.14% (Consensus)
  - Current 10Y Yield: 0.29%
  - Future 10Y Yield: 0.53% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(0.51\% - 0.24\%) = 0.27\%$

### Income Building Block

- Ending Yield:  $0.45\% + 0.27\% = 0.72\%$

Income Building Block:  $(0.45\% + 0.72\%) / 2 = 0.59\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 8.15 \times (0.72\% - 0.45\%)]^{1/5} - 1 = -0.44\%$

### Roll Down Building Block

- Current Term Structure:
  - 9Y Yield: 0.27%
  - 8Y Yield: 0.24%
  - Roll Down:  $(0.27\% - 0.24\%) \times 8.15 = 0.24\%$
- Future Term Structure:
  - 9Y Yield: 0.52%
  - 8Y Yield: 0.51%
  - Roll Down:  $(0.52\% - 0.51\%) \times 8.15 = 0.08\%$

Roll Down Building Block:  $(0.24\% + 0.08\%) / 2 = 0.16\%$



# Capital Market Assumptions

## Listed Rates CHF (all maturities) – CMA

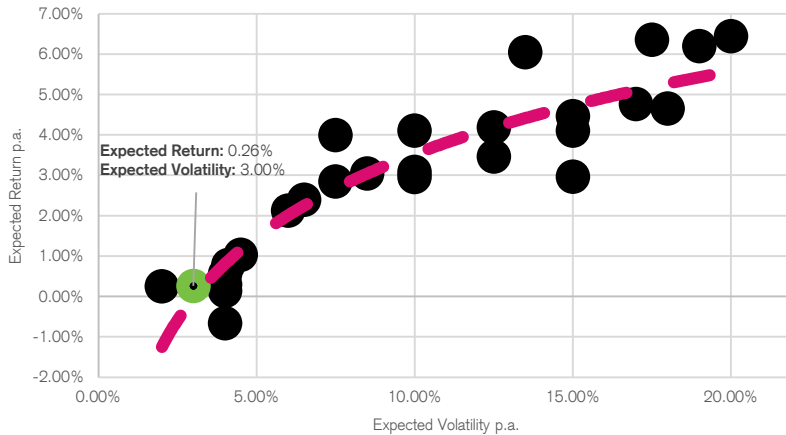
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 3.00% gesetzt.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

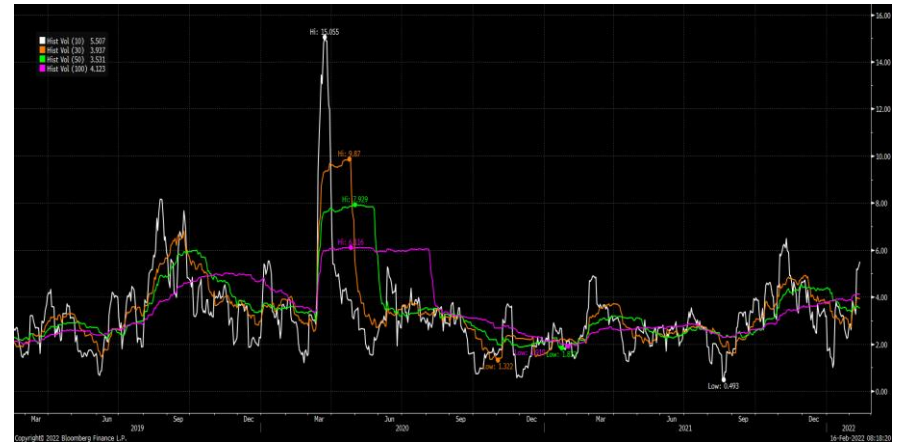
### Expected Return

0.59%	← Income
0.16%	← Roll Down
-0.44%	← Valuation
-	← Credit Loss
-	← Hedging Cost
-0.05%	← Management Fees
0.26%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 3.00%

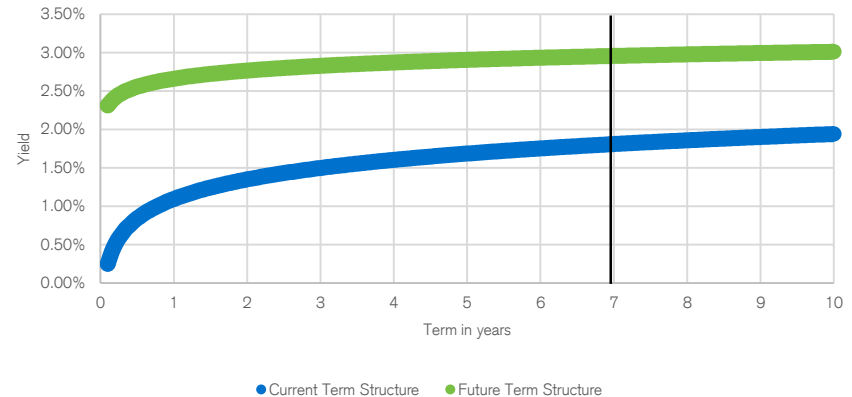
# Capital Market Assumptions

## Listed Rates USD – Modellierung

### Input

- Referenzindex:
  - Name: Bloomberg US Treasury Total Return Unhedged USD
  - Ticker: LUATTRUU Index
- Index Characteristics:
  - Starting Yield: 1.92%
  - Duration: 6.98
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.25%
  - Future Policy Rate: 2.31% (Consensus)
  - Current 10Y Yield: 1.94%
  - Future 10Y Yield: 3.01% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(2.96\% - 1.81\%) = 1.15\%$

### Income Building Block

- Ending Yield:  $1.92\% + 1.15\% = 3.07\%$

Income Building Block:  $(1.92\% + 3.07\%) / 2 = 2.50\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 6.98 \times (3.07\% - 1.92\%)]^{1/5} - 1 = -1.66\%$

### Roll Down Building Block

- Current Term Structure:
  - 7Y Yield: 1.81%
  - 6Y Yield: 1.75%
  - Roll Down:  $(1.81\% - 1.75\%) \times 6.98 = 0.42\%$
- Future Term Structure:
  - 7Y Yield: 2.96%
  - 6Y Yield: 2.93%
  - Roll Down:  $(2.96\% - 2.93\%) \times 6.98 = 0.21\%$

Roll Down Building Block:  $(0.42\% + 0.21\%) / 2 = 0.32\%$

# Capital Market Assumptions

## Listed Rates USD – CMA

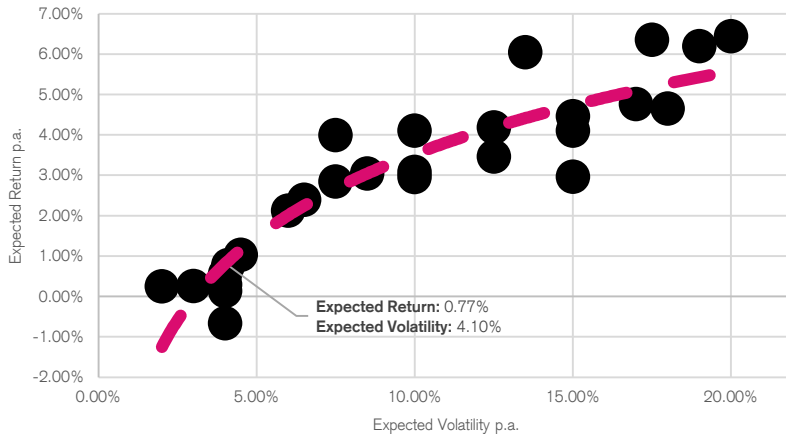
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 4.10% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

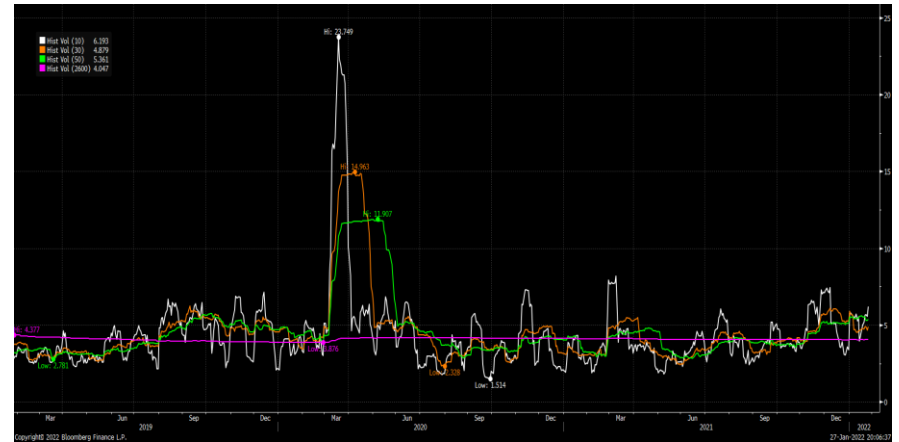
### Expected Return

2.50%	← Income
0.32%	← Roll Down
-1.66% -1.00%	← Valuation
-	← Credit Loss
-1.00%	← Hedging Cost
-0.05%	← Management Fees
0.77%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 4.10%

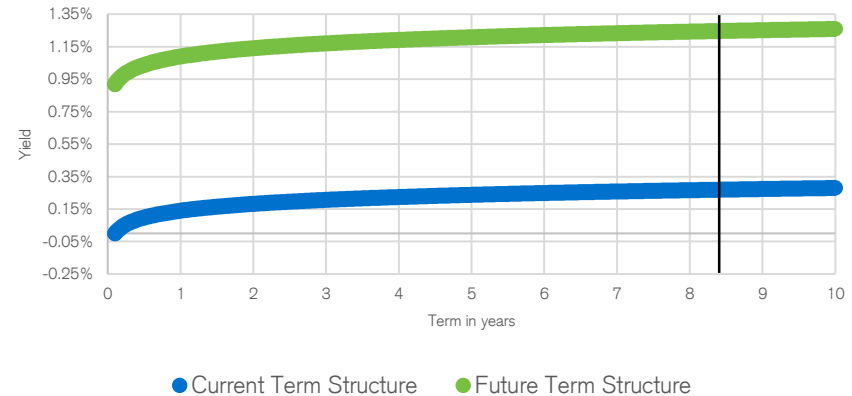
# Capital Market Assumptions

## Listed Rates EUR – Modellierung

### Input

- Referenzindex:
  - Name: Bloomberg EuroAgg Treasury Total Return Index Value Unhedged EUR
  - Ticker: LEATTREU Index
- Index Characteristics:
  - Starting Yield: 0.60%
  - Duration: 8.39
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.00%
  - Future Policy Rate: 0.92% (Consensus)
  - Current 10Y Yield: 0.28%
  - Future 10Y Yield: 1.26% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(1.25\% - 0.27\%) = 0.98\%$

### Income Building Block

- Ending Yield:  $0.60\% + 0.98\% = 1.58\%$

Income Building Block:  $(0.60\% + 1.58\%) / 2 = 1.09\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 8.39 \times (1.58\% - 0.60\%)]^{1/5} - 1 = -1.70\%$

### Roll Down Building Block

- Current Term Structure:
  - 9Y Yield: 0.27%
  - 8Y Yield: 0.27%
  - Roll Down:  $(0.27\% - 0.27\%) \times 8.39 = 0.00\%$
- Future Term Structure:
  - 9Y Yield: 1.25%
  - 8Y Yield: 1.24%
  - Roll Down:  $(1.25\% - 1.24\%) \times 8.39 = 0.08\%$

Roll Down Building Block:  $(0.00\% + 0.08\%) / 2 = 0.04\%$

# Capital Market Assumptions

## Listed Rates EUR – CMA

### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 4.00% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

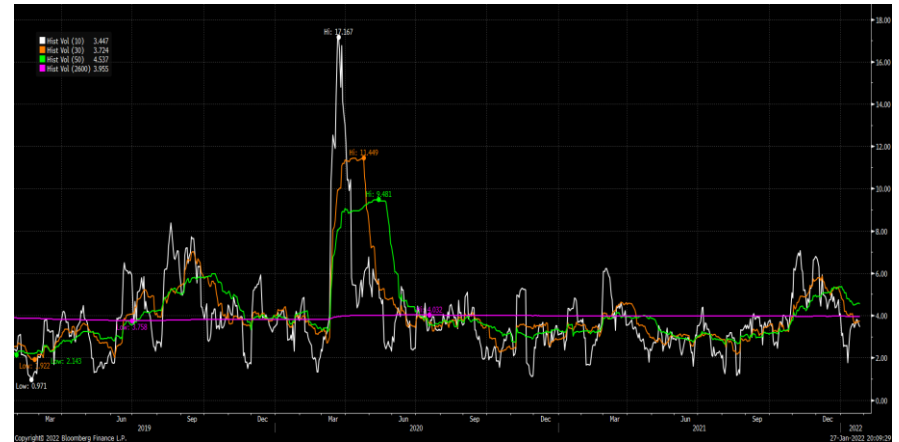
### Expected Return

1.09%	← Income
0.04%	← Roll Down
-1.70% -1.00%	← Valuation
-	← Credit Loss
-0.75%	← Hedging Cost
-0.05%	← Management Fees
-0.67%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 4.00%

# Capital Market Assumptions

## Listed Rates Non-CHF – CMA

### Input

- Referenzindex:
  - Name: Bloomberg Global Aggregate Treasuries Ex CHF Ex CNY TR (Hedged)
  - Ticker: H36355CH Index
- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 4.00% gesetzt.
- Rates USD und Rates EUR Renditeerwartungen werden mit einem Verhältnis von 2/3 bzw. 1/3 als Grundlage zur Berechnung herangezogen.

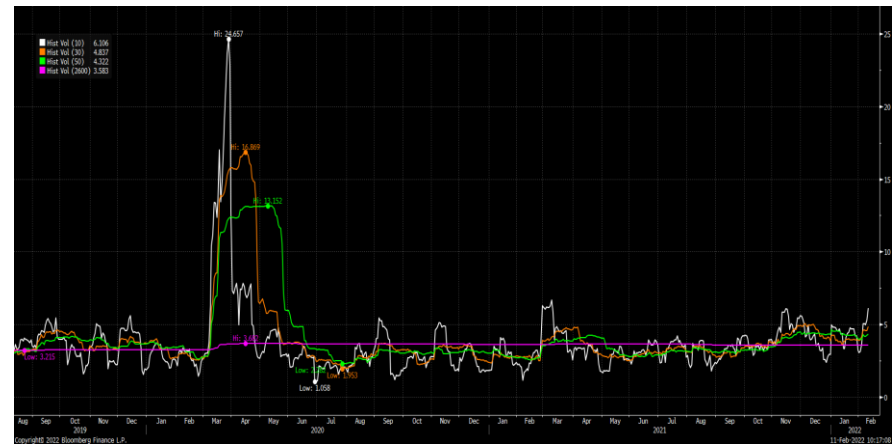
### Expected Return

0.51%	← Rates USD
-0.22%	← Rates EUR
0.29%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 4.00%

# Capital Market Assumptions

## Listed Rates EM – Modellierung

### Input

- Referenzindex:
  - Name: J.P. Morgan GBI-EM Global Diversified Unhedged CHF
  - Ticker: JGENVUCG Index
- Index Characteristics:
  - Starting Yield: 5.98%
  - Duration: 5.10
- Treasury Curve Characteristics:
  - Current Policy Rate: 1.50%
  - Future Policy Rate: 1.50% (Consensus)<sup>1)</sup>
  - Current 10Y Yield: 3.80%
  - Future 10Y Yield: 3.57% (Consensus)

<sup>1)</sup>PBOC Deposit Rate wird als Grundlage für die aktuelle Policy Rate verwendet. Ausgehend von den 10Y Yield Consensus Zahlen wird von einer konstanten Deposit Rate ausgegangen.

### Income Building Block

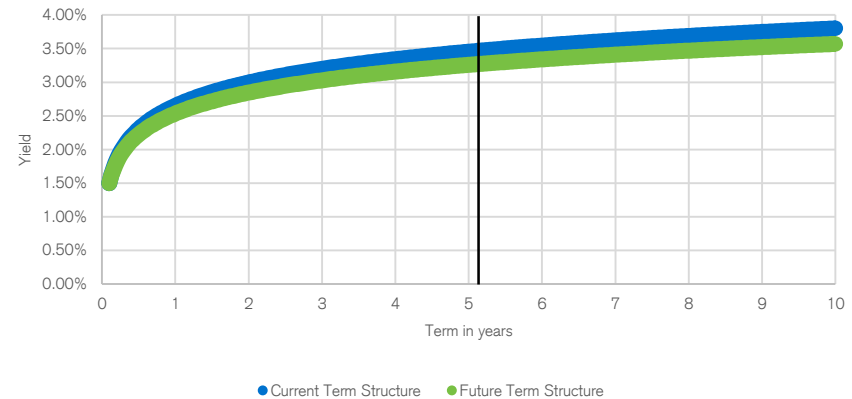
- Ending Yield:  $5.98\% + (-0.19\%) = 5.79\%$

Income Building Block:  $(5.98\% + 5.79\%) / 2 = 5.89\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 5.10 \times (5.79\% - 5.98\%)]^{1/5} - 1 = 0.19\%$

### Change in Term Structure



Change in Term Structure:  $(3.27\% - 3.46\%) = -0.19\%$

### Roll Down Building Block

- Current Term Structure:
  - 6Y Yield: 3.54%
  - 5Y Yield: 3.45%
  - Roll Down:  $(3.54\% - 3.45\%) \times 5.10 = 0.46\%$
- Future Term Structure:
  - 6Y Yield: 3.34%
  - 5Y Yield: 3.26%
  - Roll Down:  $(3.34\% - 3.26\%) \times 5.10 = 0.41\%$

Roll Down Building Block:  $(0.46\% + 0.41\%) / 2 = 0.44\%$



# Capital Market Assumptions

## Listed Rates EM – CMA

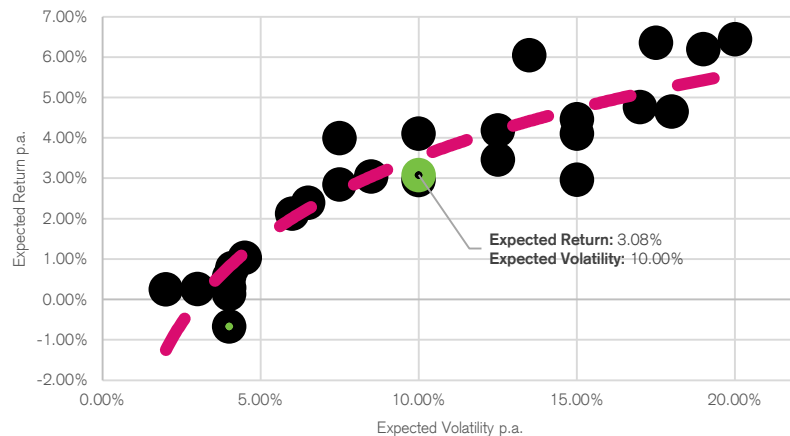
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 10.00% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation wird nach unten korrigiert, um eine Anpassung für den Wechselkurseffekt zwischen Local und Hard Currencies vorzunehmen.

### Expected Return

5.89%	← Income
0.44%	← Roll Down
0.19% -3.00%	← Valuation
-	← Credit Loss
-	← Hedging Cost
-0.25%	← Management Fees
3.08%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 10.00%

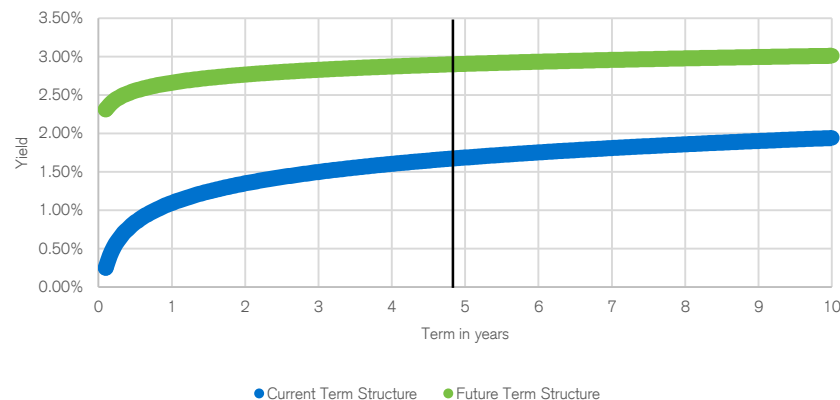
# Capital Market Assumptions

## Listed Real Rates – Modellierung

### Input

- Referenzindex:
  - Name: Bloomberg World Govt Inflation-Linked 1-10Yrs Unhedged USD Total Return
  - Ticker: BCIW3A Index
- Index Characteristics:
  - Starting Yield: -1.23%
  - Duration: 4.90
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.25%
  - Future Policy Rate: 2.31% (Consensus)
  - Current 10Y Yield: 1.94%
  - Future 10Y Yield: 3.01% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(2.90\% - 1.68\%) = 1.22\%$

### Income Building Block

- Ending Yield:  $-1.23\% + 1.22\% = -0.01\%$

Income Building Block:  $(-1.23\% - 0.01\%) / 2 = -0.62\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 4.90 \times (-0.01\% - (-1.23\%))]^{1/5} - 1 = -1.23\%$

### Roll Down Building Block

- Current Term Structure:
  - 5Y Yield: 1.69%
  - 4Y Yield: 1.60%
  - Roll Down:  $(1.69\% - 1.60\%) \times 4.90 = 0.44\%$
- Future Term Structure:
  - 5Y Yield: 2.90%
  - 4Y Yield: 2.87%
  - Roll Down:  $(2.90\% - 2.87\%) \times 4.90 = 0.15\%$

Roll Down Building Block:  $(0.44\% + 0.15\%) / 2 = 0.30\%$

# Capital Market Assumptions

## Listed Real Rates – CMA

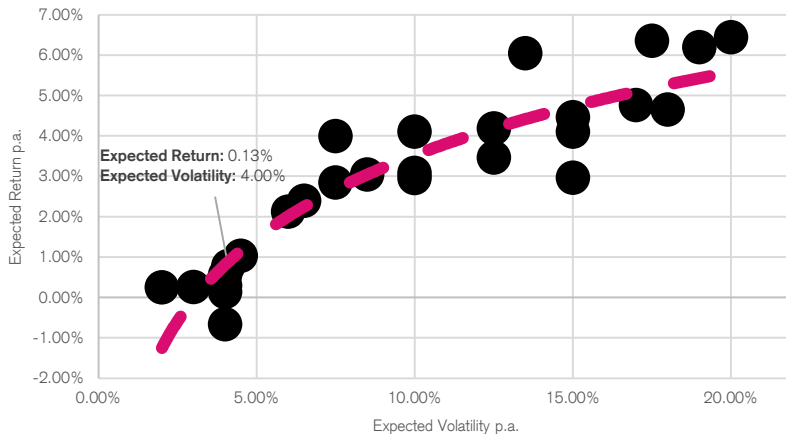
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 4.00% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

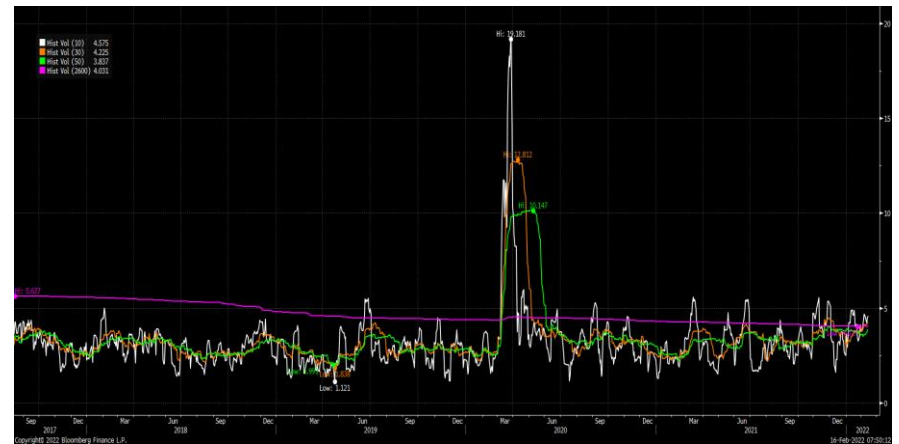
### Expected Return

-0.62%	← Income
0.30%	← Roll Down
-1.23% -0.75%	← Valuation
-	← Credit Loss
-1.00%	← Hedging Cost
-0.05%	← Management Fees
2.25%	← Expected Inflation
0.13%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 4.00%

# Capital Market Assumptions

## Private Rates PME – Modellierung

### Input

- Referenzindex:
  - Name: FTSE Fixed Income Core Infrastructure Bond Investment-Grade Index, in USD terms
  - Ticker: SBCIIGUU Index
- Index Characteristics:
  - Starting Yield: 2.35%
  - Duration: 9.21
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.25%
  - Future Policy Rate: 2.31% (Consensus)
  - Current 10Y Yield: 1.50%
  - Future 10Y Yield: 3.01% (Consensus)

### Income Building Block

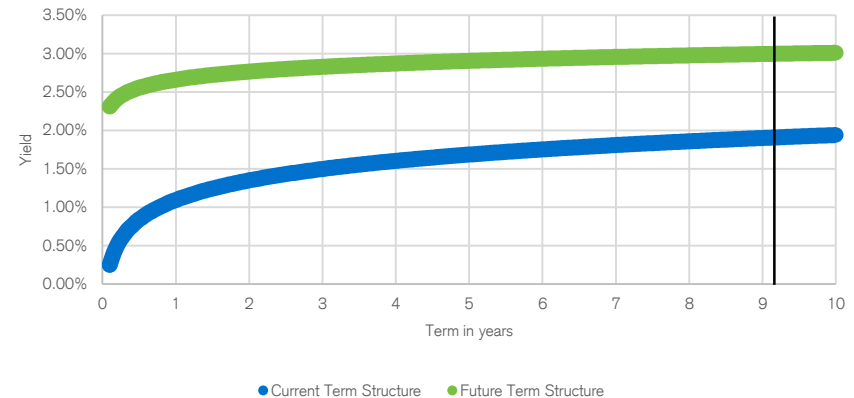
- Change in Spread:
  - Current Spread: 1.07%
  - Median Spread: 1.15%
  - Veränderung in Spread:  $1.15\% - 1.07\% = 0.08\%$
- Ending Yield:  $2.35\% + 0.08\% + 1.09\% = 3.52\%$

Income Building Block:  $(2.35\% + 3.52\%) / 2 = 2.94\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 9.21 \times (3.52\% - 2.35\%)]^{1/5} - 1 = -2.25\%$

### Change in Term Structure



Change in Term Structure:  $(3.00\% - 1.91\%) = 1.09\%$

### Roll Down Building Block

- Current Term Structure:
  - 10Y Yield: 1.94%
  - 9Y Yield: 1.90%
  - Roll Down:  $(1.94\% - 1.90\%) \times 9.21 = 0.37\%$
- Future Term Structure:
  - 10Y Yield: 3.01%
  - 9Y Yield: 2.99%
  - Roll Down:  $(3.01\% - 2.99\%) \times 9.21 = 0.18\%$

Roll Down Building Block:  $(0.37\% + 0.18\%) / 2 = 0.28\%$

# Capital Market Assumptions

## Private Rates PME – CMA

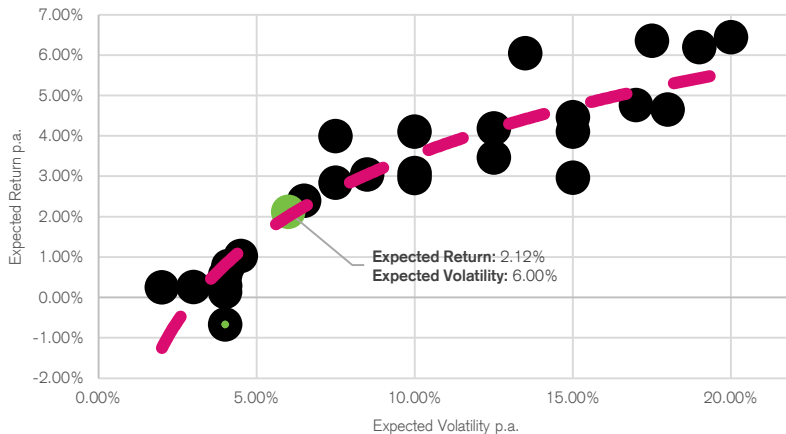
### Input

- Expected Volatility wird auf 6.00% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

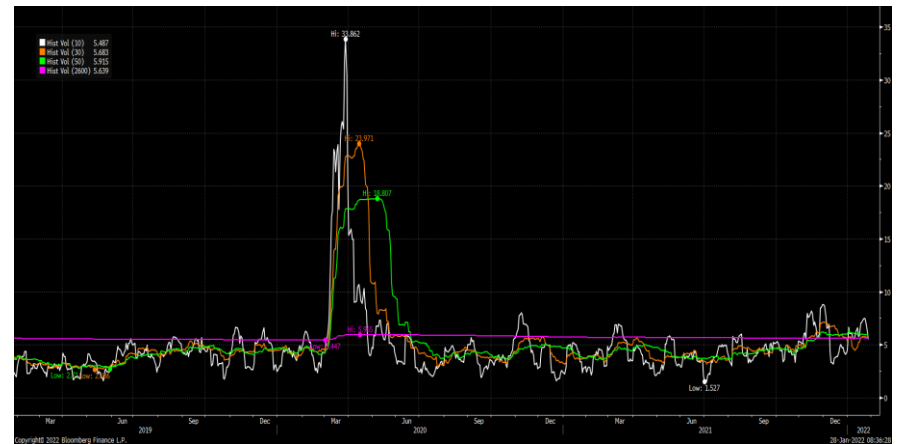
### Expected Return

2.94%	← Income
0.28%	← Roll Down
-2.25%	← Valuation
-	← Credit Loss
-1.00%	← Hedging Cost
-0.10%	← Management Fees
2.12%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 6.00%

# Capital Market Assumptions

## Private Rates – CMA

### Input

- Es werden die nachfolgenden Anpassungen vorgenommen:
  - Roll Down Effekt wird exkludiert, da die Investitionen in der Regel bis zur Endfälligkeit gehalten werden.
  - Credit Quality Discount wird hinzugefügt, da in der Anlageklasse eine bessere Kreditqualität angestrebt wird.
  - Erhöhung der Management Fees, da es sich um eine Privatmarktanlage handelt.
- Es wird zusätzlich ein «Illiquidity Premium» modelliert.
- Die für das Private Rates PME angenommene Volatilität wird minimal nach oben angepasst.

### Expected Return

2.12%	← Private Rates PME
1.00%	← Illiquidity Premium
-0.28%	← Buy & Hold Effect
-0.10%	← Credit Quality Discount
-0.35%	← Management Fee Add-On
2.39%	← Expected Return

### Capital Market Line



### Illiquidity Premium Building Block

Volatilität								
Haltedauer		5.00%	7.50%	10%	15%	20%	25%	30%
	1	1.99%	2.99%	3.99%	5.98%	7.97%	9.95%	11.92%
	2	1.40%	2.09%	2.78%	4.14%	5.47%	6.79%	8.07%
	3	1.14%	1.70%	2.25%	3.33%	4.39%	5.42%	6.41%
	5	0.88%	1.30%	1.72%	2.53%	3.31%	4.06%	4.78%
	10	0.61%	0.91%	1.19%	1.73%	2.24%	2.72%	3.16%

- Annahmen:
  - Haltedauer: 10 Jahre
  - Volatilität: 6.50%

Illiquidity Premium Building Block: 1.00%

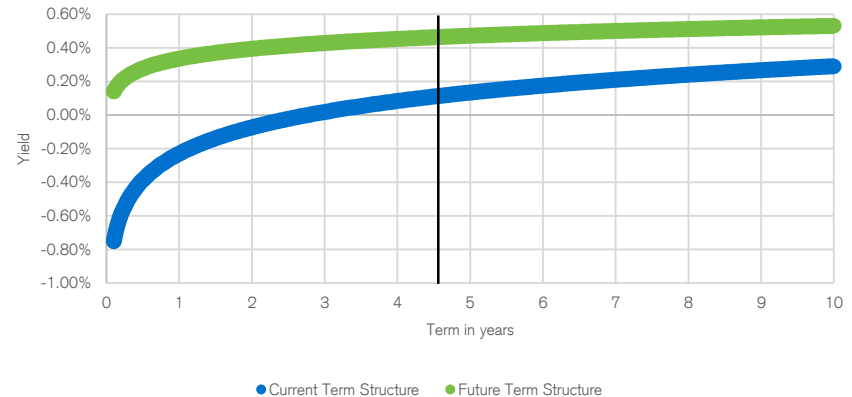
# Capital Market Assumptions

## Listed Credit CHF – Modellierung

### Input

- Referenzindex:
  - Name: SBI A-BBB TR
  - Ticker: SBR34T Index
- Index Characteristics:
  - Starting Yield: 0.81%
  - Duration: 4.60
- Treasury Curve Characteristics:
  - Current Policy Rate: -0.75%
  - Future Policy Rate: 0.14% (Consensus)
  - Current 10Y Yield: 0.29%
  - Future 10Y Yield: 0.53% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(0.46\% - 0.11\%) = 0.35\%$

### Income Building Block

- Change in Spread:
  - Aktueller Spread: 0.69%
  - Median Spread: 1.08%
  - Veränderung des Spread:  $1.08\% - 0.69\% = 0.39\%$
- Ending Yield:  $0.81\% + 0.39\% + 0.35\% = 1.55\%$

Income Building Block:  $(0.81\% + 1.55\%) / 2 = 1.18\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 4.60 \times (1.55\% - 0.81\%)]^{1/5} - 1 = -0.69\%$

### Roll Down Building Block

- Current Term Structure:
  - 5Y Yield: 0.13%
  - 4Y Yield: 0.08%
  - Roll Down:  $(0.13\% - 0.08\%) \times 4.60 = 0.23\%$
- Future Term Structure:
  - 5Y Yield: 0.47%
  - 4Y Yield: 0.45%
  - Roll Down:  $(0.47\% - 0.45\%) \times 4.60 = 0.09\%$

Roll Down Building Block:  $(0.23\% + 0.09\%) / 2 = 0.16\%$



# Capital Market Assumptions

## Listed Credit CHF – CMA

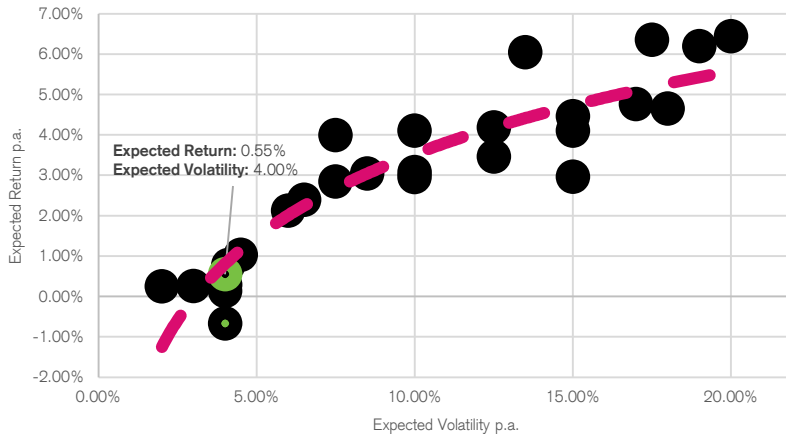
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 4.00% gesetzt.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

### Expected Return

1.18%	← Income
0.16%	← Roll Down
-0.69%	← Valuation
-0.05%	← Credit Loss
-	← Hedging Cost
-0.05%	← Management Fees
0.55%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 4.00%

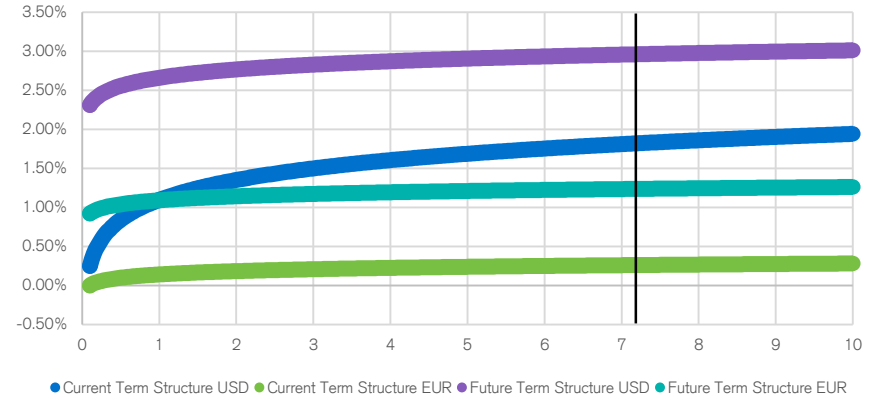
# Capital Market Assumptions

## Listed Credit Non-CHF IG – Modellierung

### Input

- Referenzindex:
  - Name: Bloomberg Global Aggregate Corporate ex. CHF TR
  - Ticker: H22052CH Index
- Index Characteristics:
  - Starting Yield: 2.60%
  - Duration: 7.13
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.25% / 0.00%
  - Future Policy Rate: 2.31% / 0.92% (Consensus)
  - Current 10Y Yield: 1.94% / 0.28%
  - Future 10Y Yield: 3.01% / 1.26% (Consensus)
- Modellierung des Change in Term Structure findet anhand der gleichgewichteten Veränderungen der USD und EUR Kurven statt.

### Change in Term Structure



- Change in USD Term Structure: 1.15%
- Change in EUR Term Structure : 0.98%

Change in Term Structure:  $(1.15\% + 0.98\%) / 2 = 1.07\%$

### Roll Down Building Block

- USD Term Structure:
  - Roll Down: 0.28%
- EUR Term Structure:
  - Roll Down: 0.04%

Roll Down Building Block:  $(0.28\% + 0.04\%) / 2 = 0.16\%$

### Income Building Block

- Change in Spread:
  - Aktueller Spread: 1.16%
  - Median Spread: 1.23%
  - Veränderung des Spread:  $1.23\% - 1.16\% = 0.07\%$
- Ending Yield:  $2.60\% + 0.07\% + 1.07\% = 3.74\%$

Income Building Block:  $(2.60\% + 3.74\%) / 2 = 3.17\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 7.13 \times (3.74\% - 2.60\%)]^{1/5} - 1 = -1.68\%$

# Capital Market Assumptions

## Listed Credit Non-CHF IG – CMA

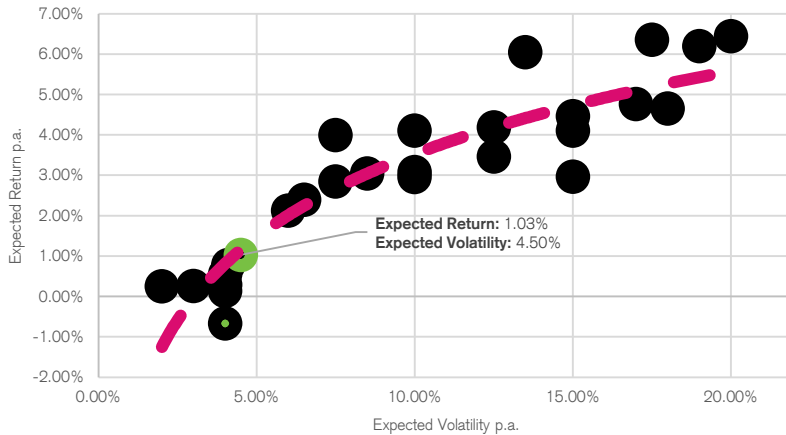
### Input

- Expected Volatility wird auf 4.50% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

### Expected Return

3.17%	← Income
0.16%	← Roll Down
-1.68% -1.10%	← Valuation
-0.15%	← Credit Loss
-1.00%	← Hedging Cost
-0.05%	← Management Fees
1.03%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 4.50%

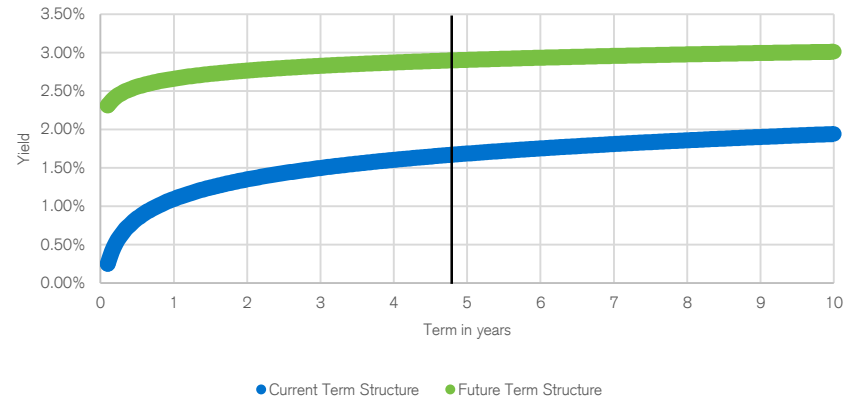
# Capital Market Assumptions

## Listed Credit Non-CHF HY – Modellierung

### Input

- Referenzindex:
  - Name: Bloomberg Global High Yield Total Return Value Hedged CHF
  - Ticker: H00039CH Index
- Index Characteristics:
  - Starting Yield: 6.05%
  - Duration: 4.83
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.25%
  - Future Policy Rate: 2.31% (Consensus)
  - Current 10Y Yield: 1.94%
  - Future 10Y Yield: 3.01% (Consensus)

### Change in Term Structure



Change in Term Structure:  $(2.90\% - 1.67\%) = 1.23\%$

### Income Building Block

- Change in Spread:
  - Aktueller Spread: 4.05%
  - Median Spread: 4.70%
  - Veränderung des Spread:  $4.70\% - 4.05\% = 0.65\%$
- Ending Yield:  $6.05\% + 0.65\% + 1.23\% = 7.93\%$

Income Building Block:  $(6.05\% + 7.93\%) / 2 = 6.99\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 4.83 \times (7.93\% - 6.05\%)]^{1/5} - 1 = -1.89\%$

### Roll Down Building Block

- Current Term Structure:
  - 5Y Yield: 1.69%
  - 4Y Yield: 1.60%
  - Roll Down:  $(1.69\% - 1.60\%) \times 4.83 = 0.43\%$
- Future Term Structure:
  - 5Y Yield: 2.90%
  - 4Y Yield: 2.87%
  - Roll Down:  $(2.90\% - 2.87\%) \times 4.83 = 0.14\%$

Roll Down Building Block:  $(0.43\% + 0.14\%) / 2 = 0.29\%$

# Capital Market Assumptions

## Listed Credit Non-CHF HY – CMA

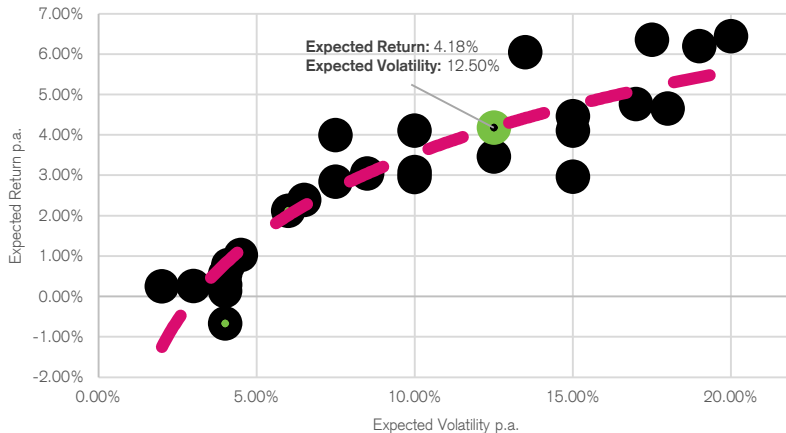
### Input

- Expected Volatility wird auf 12.50% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

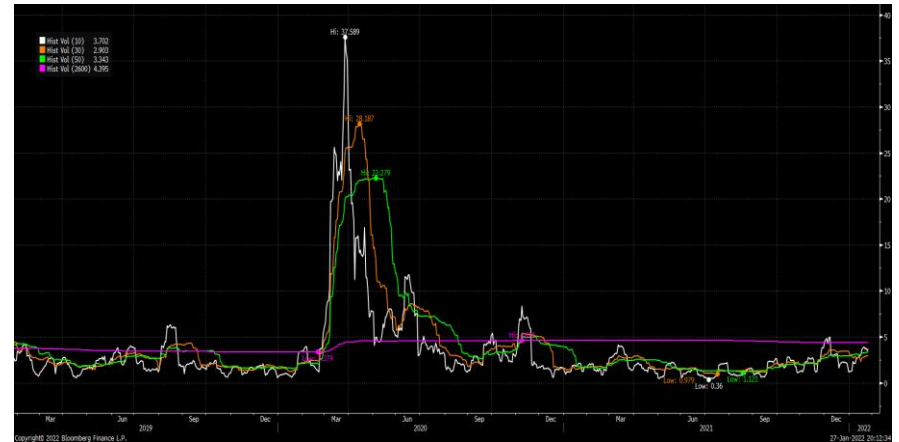
### Expected Return

6.99%	← Income
0.29%	← Roll Down
-1.89% -1.50%	← Valuation
-0.50%	← Credit Loss
-1.00%	← Hedging Cost
-0.10%	← Management Fees
4.18%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 12.50%

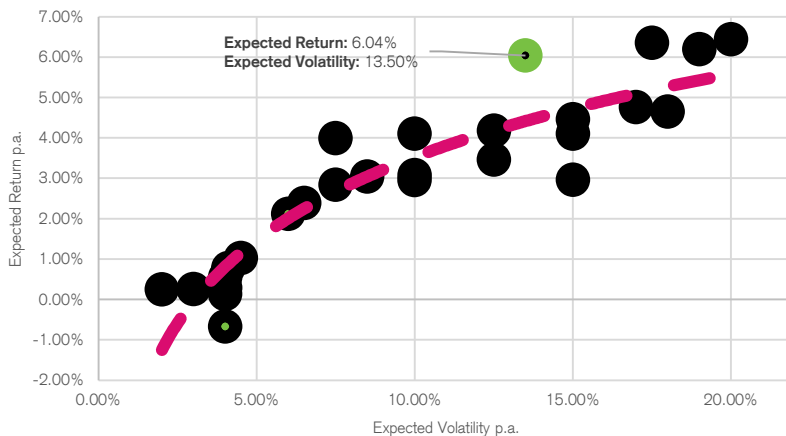
# Capital Market Assumptions

## Private Credit – CMA

### Input

- Es werden die nachfolgenden Anpassungen an den «Listed Credit Non-CHF HY» Annahmen vorgenommen:
  - Roll Down Effekt wird exkludiert, da die Loans in der Regel bis zur Endfälligkeit gehalten werden.
  - Floating Rate Effekt wird exkludiert, da die Loans in der Regel eine variable Verzinsung aufweisen.
  - Erhöhung der Management Fees, da es sich um eine Privatmarktanlage handelt.
- Es wird zusätzlich ein «Illiquidity Premium» modelliert.
- Die für das «Listed Credit Non-CHF HY» angenommene Volatilität wird leicht nach oben korrigiert.

### Capital Market Line



### Expected Return

4.18%	← Listed Credit Non-CHF HY
1.00%	← Illiquidity Premium
-0.29%	← Buy & Hold Effect
1.50%	← Floating Rate Effect
-0.35%	← Management Fee Add-On
6.04%	← Expected Return

### Illiquidity Premium Building Block

Haltedauer	Volatilität							
		5.00%	7.50%	10%	15%	20%	25%	30%
1		1.99%	2.99%	3.99%	5.98%	7.97%	9.95%	11.92%
2		1.40%	2.09%	2.78%	4.14%	5.47%	6.79%	8.07%
3		1.14%	1.70%	2.25%	3.33%	4.39%	5.42%	6.41%
5		0.88%	1.30%	1.72%	2.53%	3.31%	4.06%	4.78%
10		0.61%	0.91%	1.19%	1.73%	2.24%	2.72%	3.16%

- Annahmen:
  - Haltedauer: 10 Jahre
  - Volatilität: 13.50%

Illiquidity Premium Building Block: 1.00%

# Capital Market Assumptions

## Listed Credit EM – Modellierung

### Input

- Referenzindex:
  - Name: J.P. Morgan CEMBI Broad Diversified Composite TR
  - Ticker: JBCDCOMP Index
- Index Characteristics:
  - Starting Yield: 4.60%
  - Duration: 5.03
- Treasury Curve Characteristics:
  - Current Policy Rate: 0.25%
  - Future Policy Rate: 2.31%
  - Current 10Y Yield: 1.94%
  - Future 10Y Yield: 3.01%

### Income Building Block

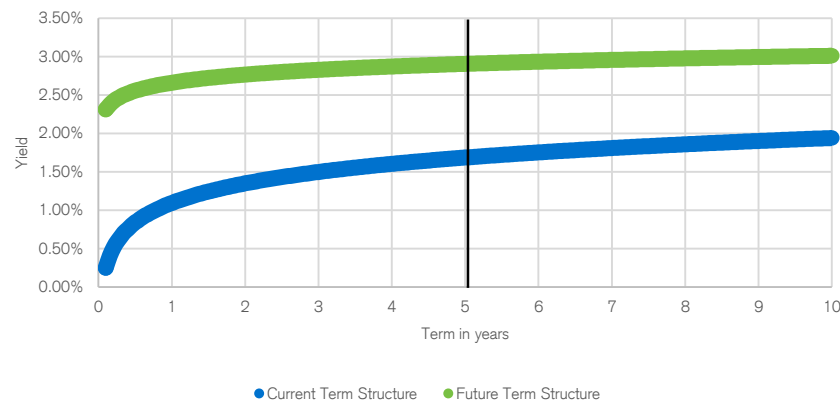
- Change in Spread:
  - Aktueller Spread: 1.16%
  - Median Spread: 1.23%
  - Veränderung des Spread:  $1.23\% - 1.16\% = 0.07\%$
- Ending Yield:  $4.60\% + 0.07\% + 1.24\% = 5.91\%$

Income Building Block:  $(4.60\% + 5.91\%) / 2 = 5.26\%$

### Valuation Building Block

Valuation Building Block:  $[1 - 5.03 \times (5.91\% - 4.60\%)]^{1/5} - 1 = -1.35\%$

### Change in Term Structure



Change in Term Structure:  $(2.93\% - 1.69\%) = 1.24\%$

### Roll Down Building Block

- Current Term Structure:
  - 5Y Yield: 1.75%
  - 4Y Yield: 1.69%
  - Roll Down:  $(1.75\% - 1.69\%) \times 5.03 = 0.30\%$
- Future Term Structure:
  - 5Y Yield: 2.93%
  - 4Y Yield: 2.90%
  - Roll Down:  $(2.93\% - 2.90\%) \times 5.03 = 0.15\%$

Roll Down Building Block:  $(0.30\% + 0.15\%) / 2 = 0.23\%$



# Capital Market Assumptions

## Listed Credit EM – CMA

### Input

- Expected Volatility wird auf 7.50% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Valuation Building Block wird nach oben korrigiert, da von weniger schnell ansteigenden Zinsen ausgegangen wird.

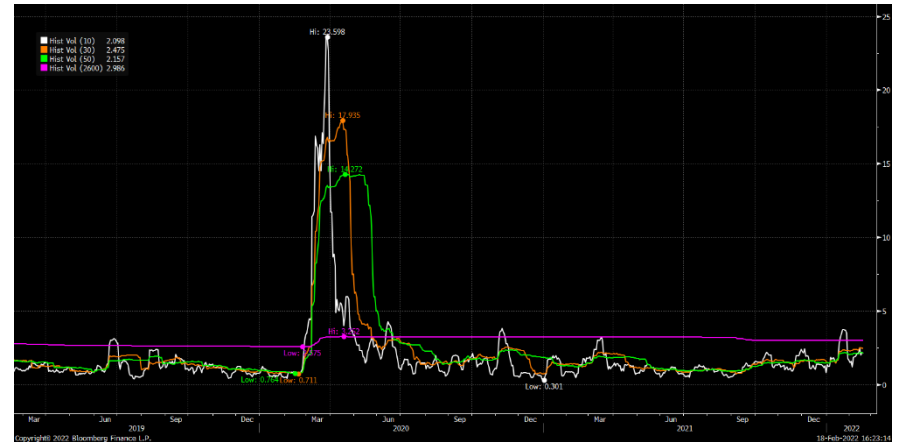
### Expected Return

5.26%	← Income
0.23%	← Roll Down
-1.35% -1.10%	← Valuation
-0.30%	← Credit Loss
-1.00%	← Hedging Cost
-0.25%	← Management Fees
2.84%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 7.50%

# Capital Market Assumptions

## Real Assets



# Capital Market Assumptions

## Listed Equity CH– Modellierung

### Input

- Referenzindex:
  - Name: Swiss Performance Index
  - Ticker: SPI Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 2.45%
  - Median Dividend Yield: 3.00%

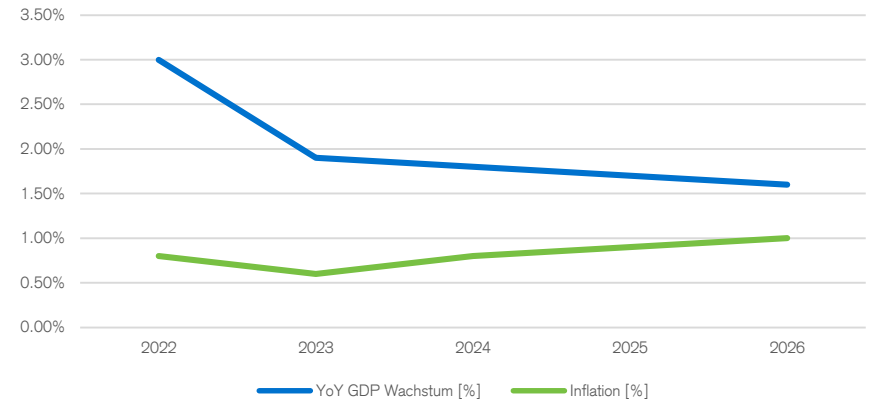
Income Building Block: 2.45%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 18.40
  - Median PE: 17.45
  - Veränderung des PE:  $[(17.45/18.40)^{1/5} - 1 = -1.05\%$

Valuation Building Block: -1.05%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 2.00% (Consensus)
- Erwartete Inflation: 0.80% (Consensus)

Earnings Growth Building Block: 2.00% + 0.80% = 2.80%

# Capital Market Assumptions

## Listed Equity CH– CMA

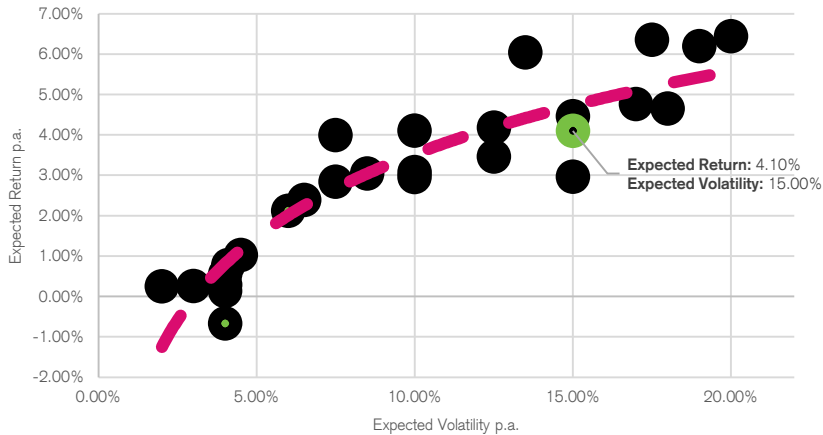
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 15.00% gesetzt.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

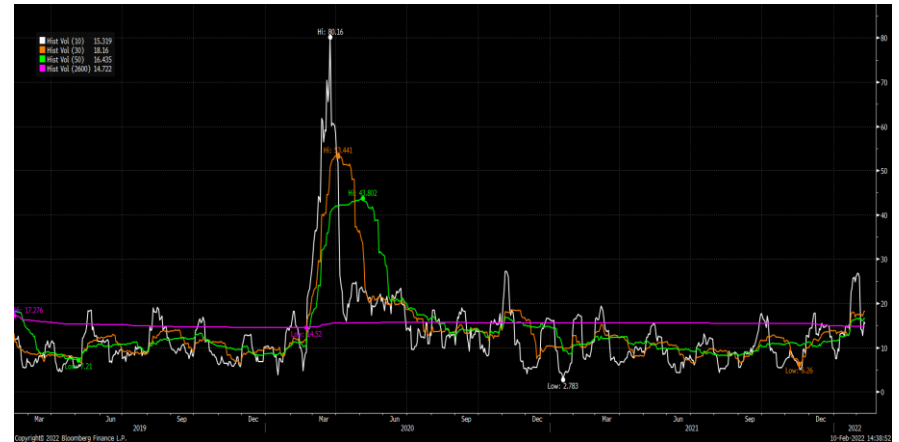
### Expected Return

2.45%	← Income
2.80%	← Earnings Growth
-1.05%	← Valuation
-	← Hedging Cost
-0.10%	← Management Fees
4.10%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 15.00%

# Capital Market Assumptions

## Listed Equity Europe Non-CH – Modellierung

### Input

- Referenzindex:
  - Name: MSCI Europe ex Switzerland IMI Net TR
  - Ticker: MIMUEXSN Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 2.69%
  - Median Dividend Yield: 3.60%

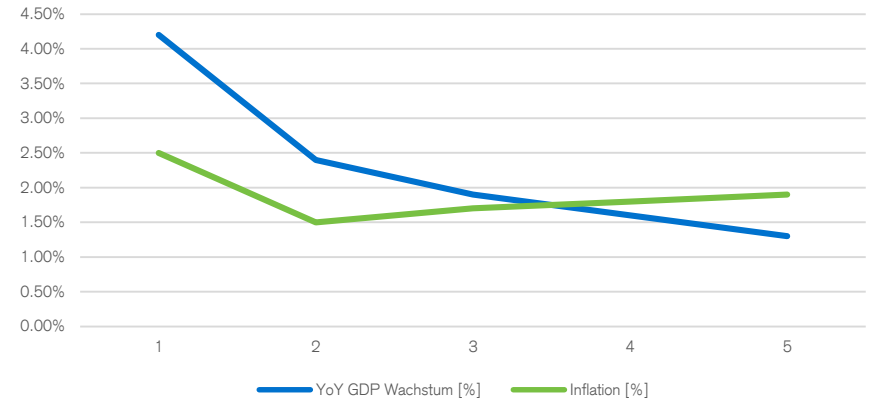
Income Building Block: 2.69%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 15.84
  - Median PE: 14.81
  - Veränderung des PE:  $[(14.81/15.84)^{1/5} - 1 = -1.34\%$

Valuation Building Block: -1.34%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 2.25% (Consensus)
- Erwartete Inflation: 1.90% (Consensus)

Earnings Growth Building Block: 2.25% + 1.90% = 4.15%

# Capital Market Assumptions

## Listed Equity Europe Non-CH – CMA

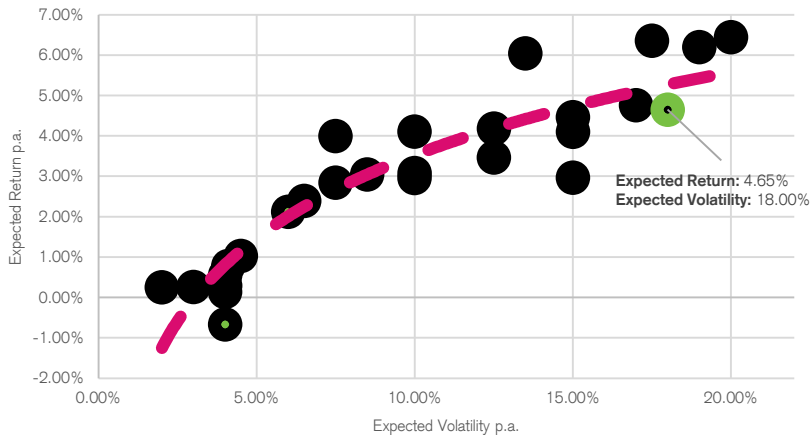
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 18.00% gesetzt.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

### Expected Return

2.69%	← Income
4.15%	← Earnings Growth
-1.34%	← Valuation
-0.75%	← Hedging Cost
-0.10%	← Management Fees
4.65%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 18.00%

# Capital Market Assumptions

## Listed Equity North America– Modellierung

### Input

- Referenzindex:
  - Name: MSCI North America IMI
  - Ticker: M1NAIM Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 1.42%
  - Median Dividend Yield: 1.95%
- Buyback Yield:
  - Starting Buyback Yield: 1.00%

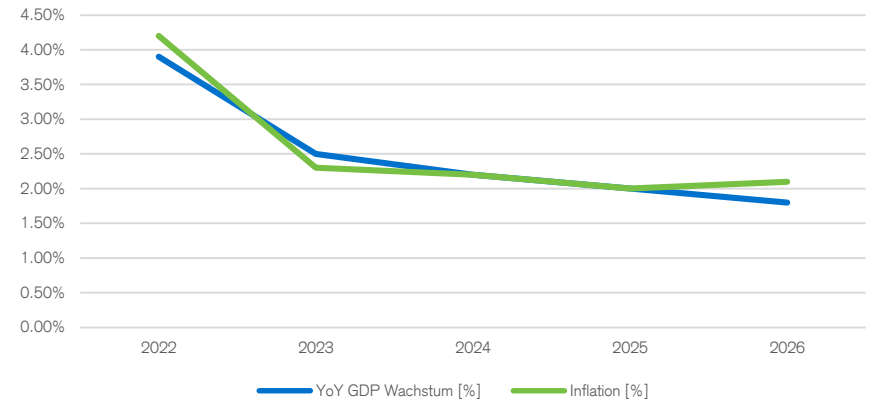
Income Building Block:  $1.42\% + 1.00\% = 2.42\%$

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 19.74
  - Median PE: 18.25
  - Veränderung des PE:  $[(18.25/19.74)^{1/5} - 1 = -1.56\%$

Valuation Building Block: -1.56%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 2.50% (Consensus)
- Erwartete Inflation: 2.50% (Consensus)

Earnings Growth Building Block:  $2.50\% + 2.50\% = 5.00\%$



# Capital Market Assumptions

## Listed Equity North America– CMA

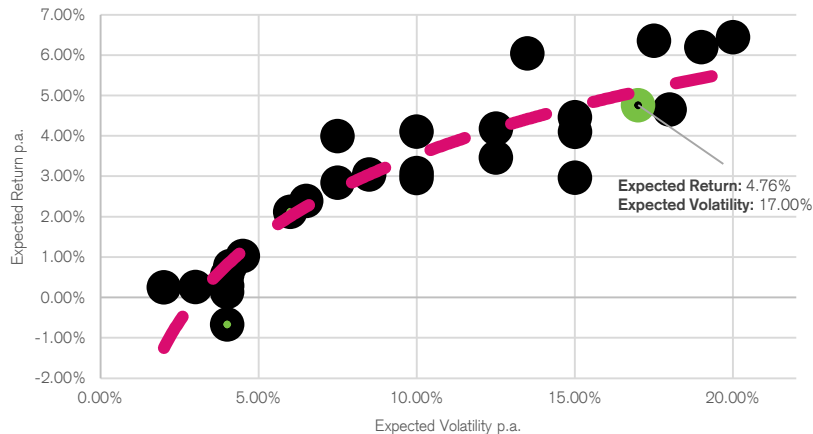
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 17.00% gesetzt.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

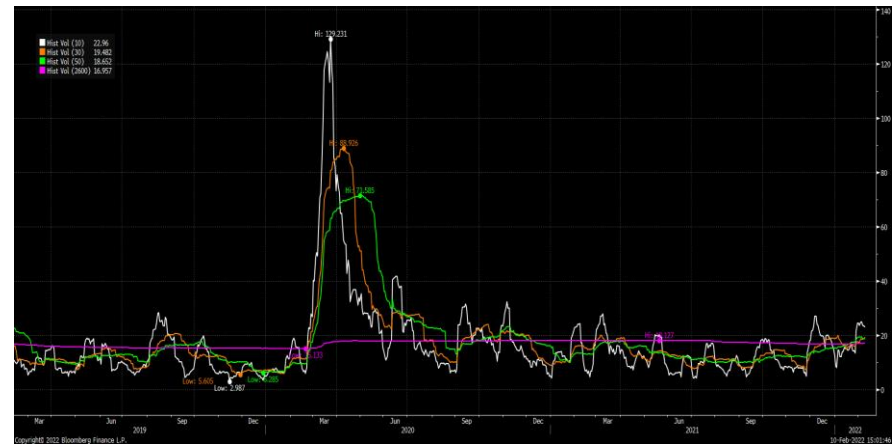
### Expected Return

2.42%	← Income
5.00%	← Earnings Growth
-1.56%	← Valuation
-1.00%	← Hedging Cost
-0.10%	← Management Fees
4.76%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 17.00%

# Capital Market Assumptions

## Listed Equity Pacific– Modellierung

### Input

- Referenzindex:
  - Name: MSCI Pacific IMI Net TR
  - Ticker: M1PCIME Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 2.71%
  - Median Dividend Yield: 2.66%

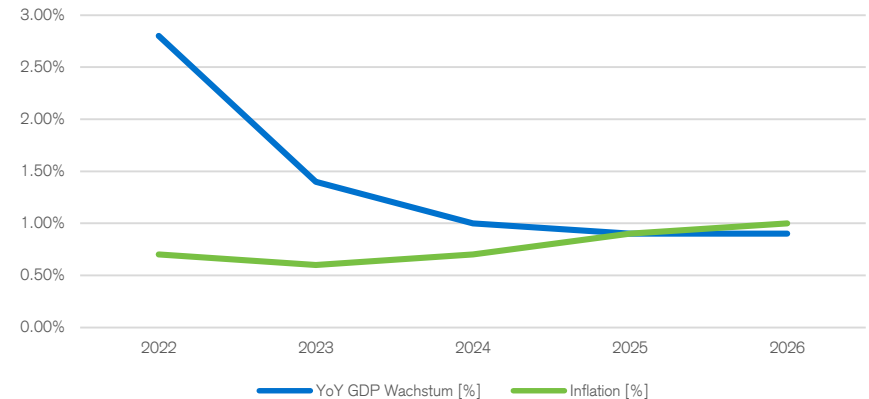
Income Building Block: 2.71%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 14.85
  - Median PE: 14.96
  - Veränderung des PE:  $[(14.96/14.85)^{1/5} - 1 = 0.15\%$

Valuation Building Block: 0.15%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 1.40% (Consensus)
- Erwartete Inflation: 0.80% (Consensus)

Earnings Growth Building Block: 1.40% + 0.80% = 2.20%

# Capital Market Assumptions

## Listed Equity Pacific – CMA

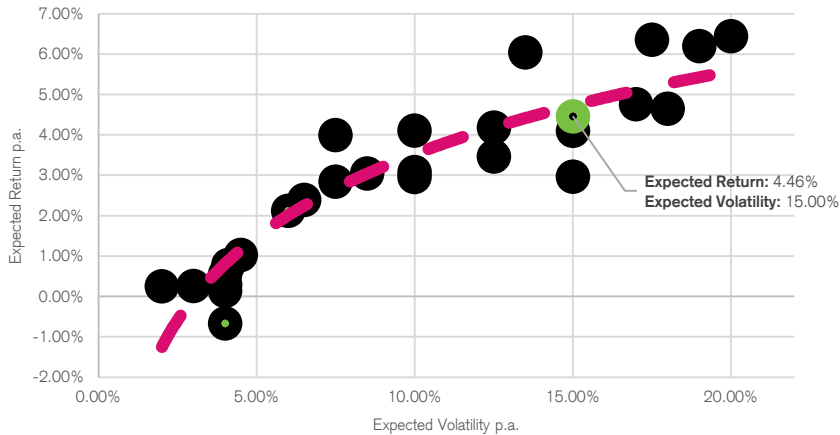
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 15.00% gesetzt.
- Expected Return wird gemäss der ermittelten Building Blocks definiert. Hierbei werden keine Anpassungen der individuellen Building Blocks vorgenommen.

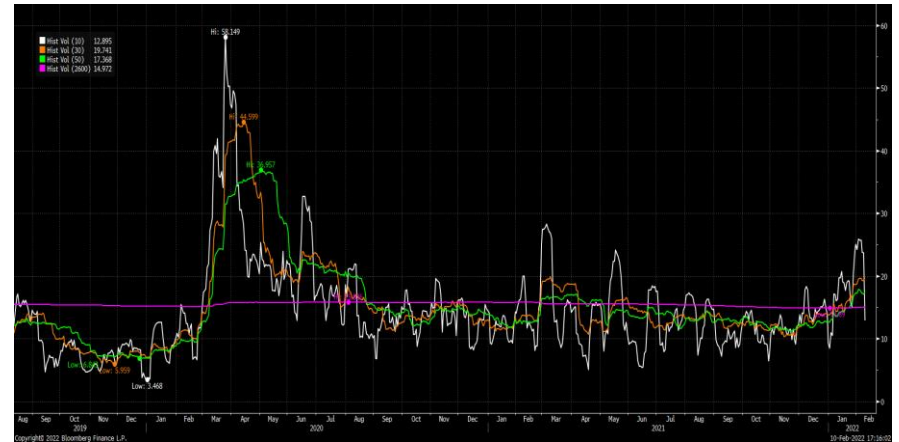
### Expected Return

2.71%	← Income
2.20%	← Earnings Growth
0.15%	← Valuation
-0.50%	← Hedging Cost
-0.10%	← Management Fees
4.46%	← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 15.00%

# Capital Market Assumptions

## Listed Equity EM Non-China – Modellierung

### Input

- Referenzindex:
  - Name: MSCI Emerging Markets ex China Net TR
  - Ticker: M1CXBRV Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 2.83%
  - Median Dividend Yield: 2.75%

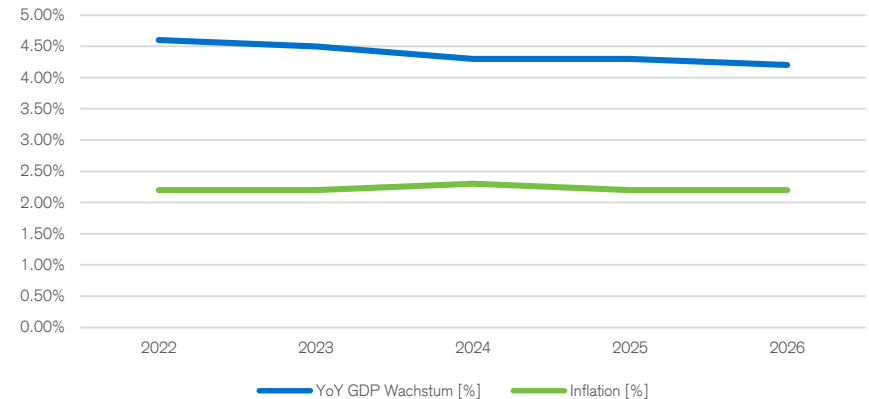
Income Building Block: 2.83%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 12.37
  - Median PE: 12.97
  - Veränderung des PE:  $[(12.97/12.37)^{1/5} - 1 = 0.94\%$

Valuation Building Block: 0.94%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 4.40% (Consensus)
- Erwartete Inflation: 2.20% (Consensus)

Earnings Growth Building Block: 4.40% + 2.20% = 6.60%

# Capital Market Assumptions

## Listed Equity EM Non-China – CMA

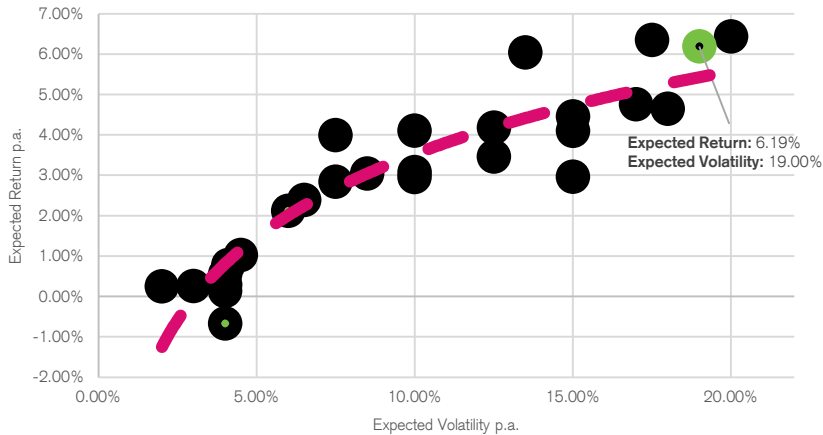
### Input

- Expected Volatility wird auf 19.00% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Income Building Block wird nach unten korrigiert, um diese Komponente auf ein nachhaltiges Levels zu begrenzen.
  - Earnings Growth Building Block wird nach unten korrigiert. Dies setzt sich zusammen aus einer Reduktion der «verwertbaren» Inflation auf 1.00% und einem reduzierten GDP Wachstum von 2.50%.

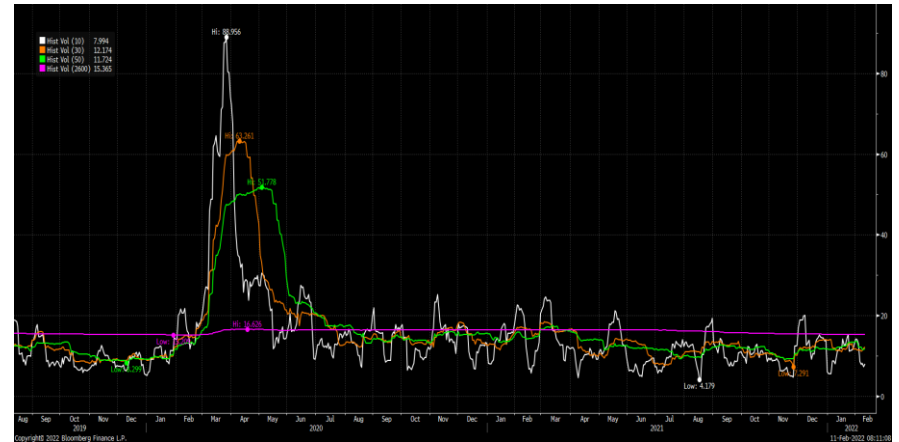
### Expected Return

2.83%	2.00%	← Income
6.20%	3.50%	← Earnings Growth
0.94%		← Valuation
-		← Hedging Cost
-0.25%		← Management Fees
6.19%		← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 19.00%

# Capital Market Assumptions

## Listed Equity EM China – Modellierung

### Input

- Referenzindex:
  - Name: MSCI China All Shares Net TR
  - Ticker: MXCNANM Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 1.75%
  - Median Dividend Yield: 1.65%

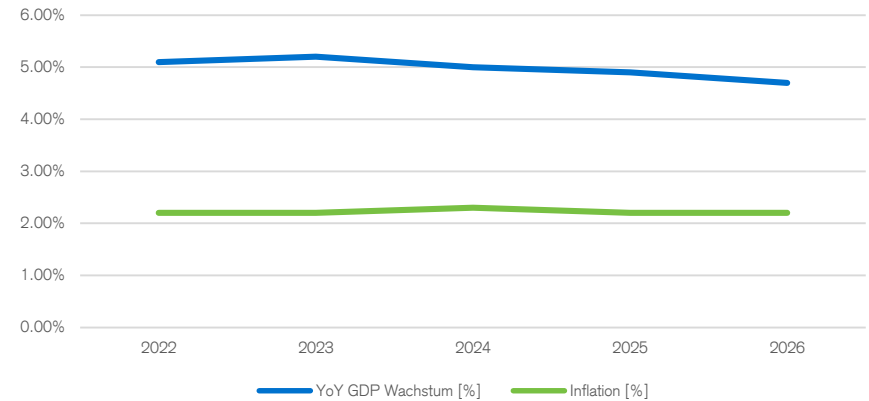
Income Building Block: 1.75%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 13.28
  - Median PE: 16.00
  - Veränderung des PE:  $[(16.00/13.28)^{1/5} - 1 = 3.80\%$

Valuation Building Block: 3.80%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 5.00% (Consensus)
- Erwartete Inflation: 2.20% (Consensus)

Earnings Growth Building Block: 5.00% + 2.20% = 7.20%

# Capital Market Assumptions

## Listed Equity EM China – CMA

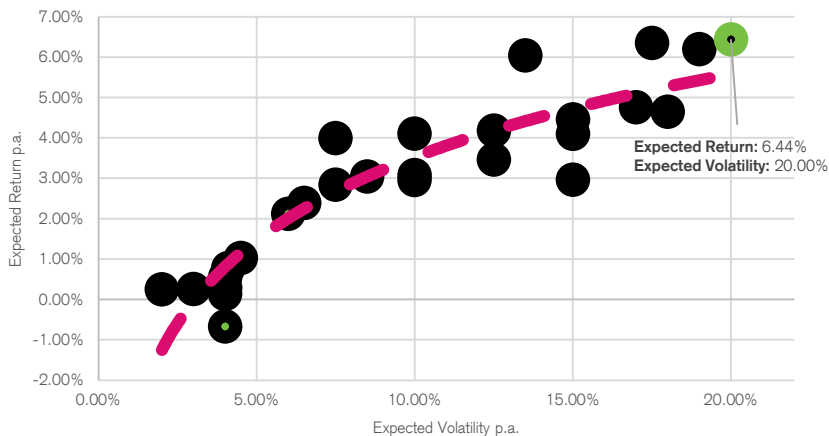
### Input

- Expected Volatility wird auf 20.00% nach oben korrigiert, um die Risiko/Rendite Eigenschaften der Anlageklasse adäquat abzubilden.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Earnings Growth Building Block wird nach unten korrigiert. Dies setzt sich zusammen aus einer Reduktion der «verwertbaren» Inflation auf 1.00% und einem reduzierten GDP Wachstum von 3.00%.
  - Valuation Building Block wird nach unten korrigiert, da die Datenhistorie für EM China nur sehr kurz ist (Ende 2018-2022). Als Proxy wird Equities EM ex China verwendet.

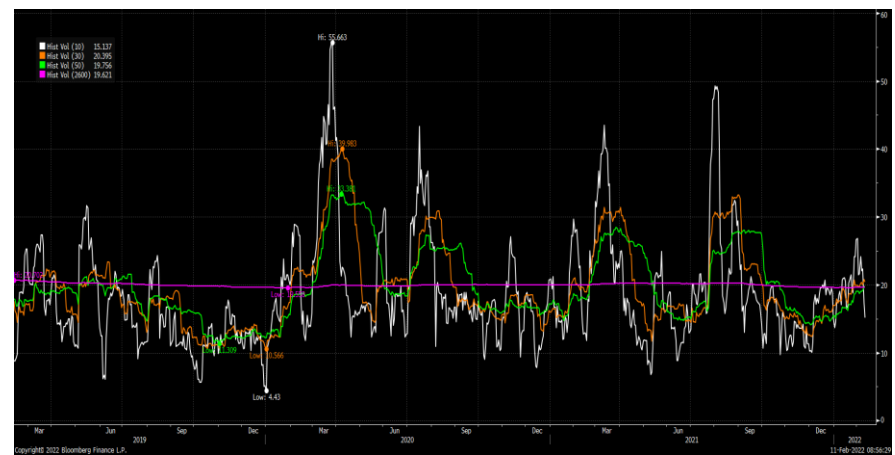
### Expected Return

1.75%	← Income
7.20% 4.00%	← Earnings Growth
3.80% 0.94%	← Valuation
-	← Hedging Cost
-0.25%	← Management Fees
6.44%	← Expected Return

### Capital Market Line



### Expected Volatility



# Capital Market Assumptions

## Private Equity – CMA

### Input

- Der marktgewichtete Durchschnitt (70% North America, 15% Europe Non-CH, 12% Pacific und 3% CH) der Renditeerwartungen der «Developed Markets» bildet das PME für Private Equity.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Erhöhung der Management Fees, da es sich um eine Privatmarktanlage handelt
- Es wird zusätzlich ein «Illiquidity Premium» modelliert.
- Die angenommene Volatilität wird auf 17.50% gesetzt und bildet somit den Schnitt über die Märkte hinreichend genau ab.

### Expected Return

4.70%	← Listed Equity PME
2.00%	← Illiquidity Premium
-0.35%	← Management Fee Add-On
6.35%	← <b>Expected Return</b>

### Capital Market Line



### Illiquidity Premium Building Block

		Volatilität						
Haltedauer		5.00%	7.50%	10%	15%	20%	25%	30%
	1	1.99%	2.99%	3.99%	5.98%	7.97%	9.95%	11.92%
	2	1.40%	2.09%	2.78%	4.14%	5.47%	6.79%	8.07%
	3	1.14%	1.70%	2.25%	3.33%	4.39%	5.42%	6.41%
	5	0.88%	1.30%	1.72%	2.53%	3.31%	4.06%	4.78%
	10	0.61%	0.91%	1.19%	1.73%	2.24%	2.72%	3.16%

- Annahmen:
  - Haltedauer: 10 Jahre
  - Volatilität: 17.50%

Illiquidity Premium Building Block: 2.00%



# Capital Market Assumptions

## Infrastructure PME – Modellierung

### Input

- Referenzindex:
  - Name: S&P Global Infrastructure Total Return Index
  - Ticker: SPGTINTR Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 3.27%
  - Median Dividend Yield: 4.05%

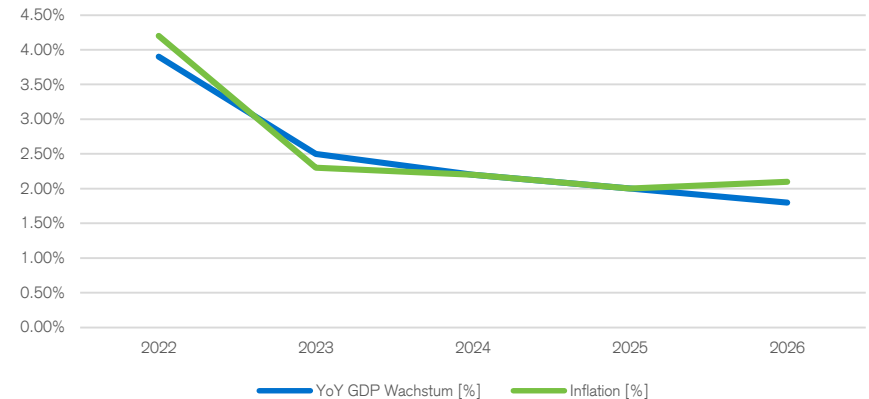
Income Building Block: 3.27%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 19.79
  - Median PE: 19.85
  - Veränderung des PE:  $[(19.85/19.79)^{1/5} - 1 = 0.06\%$

Valuation Building Block: 0.06%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 2.50% (Consensus)
- Erwartete Inflation: 2.50% (Consensus)

Earnings Growth Building Block: 2.50% + 2.50% = 5.00%

# Capital Market Assumptions

## Infrastructure PME – CMA

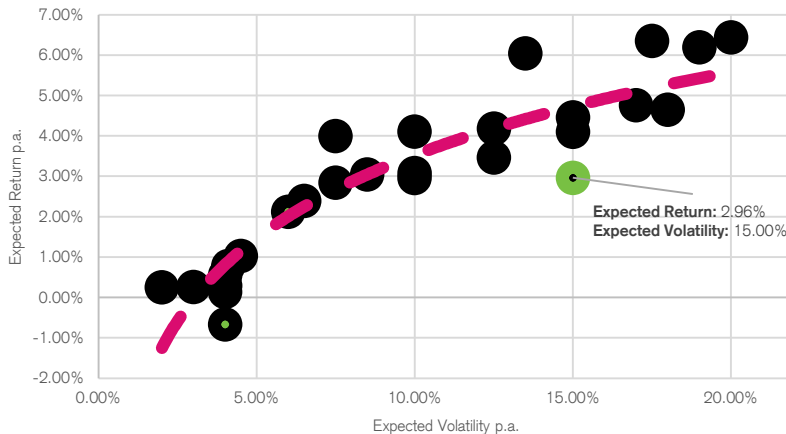
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 15.00% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Income Building Block wird nach unten korrigiert. Dies lässt sich durch die angestrebte konservative Ausrichtung («Core Infrastructure») begründen.
  - Earnings Growth Building Block wird nach unten korrigiert. Dies lässt sich durch eine Reduktion des «verwertbaren» GDP Wachstums auf 0.50% erklären.

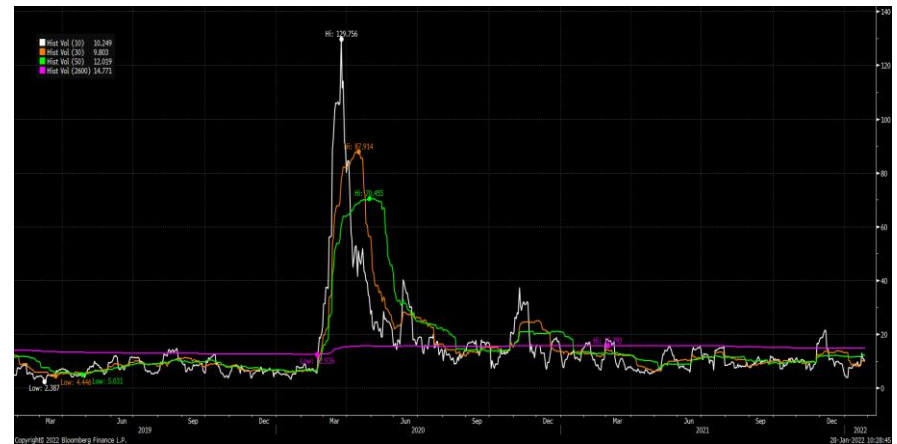
### Expected Return

3.27%	1.00%	← Income
5.00%	3.00%	← Earnings Growth
0.06%		← Valuation
-1.00%		← Hedging Cost
-0.10%		← Management Fees
2.96%		← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 15.00%

# Capital Market Assumptions

## Infrastructure – CMA

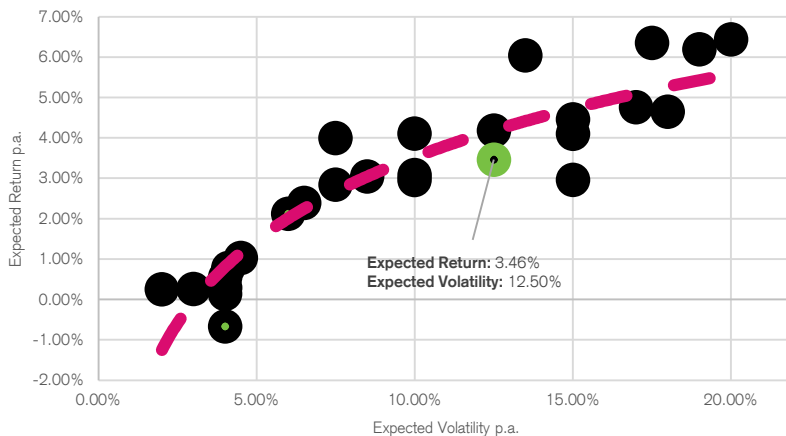
### Input

- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Erhöhung der Management Fees, da es sich um eine Privatmarktanlage handelt
- Es wird zusätzlich ein «Illiquidity Premium» modelliert.
- Die für das Infrastructure PME angenommene Volatilität wird auf 12.50% nach unten angepasst, da der Fokus im Bereich Infrastructure auf Core Infrastructure liegen soll.

### Expected Return

2.96%	← Infrastructure PME
1.00%	← Illiquidity Premium
-0.50%	← Management Fee Add-On
3.46%	← <b>Expected Return</b>

### Capital Market Line



### Illiquidity Premium Building Block

	Volatilität							
		5.00%	7.50%	10%	15%	20%	25%	30%
Haltedauer	1	1.99%	2.99%	3.99%	5.98%	7.97%	9.95%	11.92%
	2	1.40%	2.09%	2.78%	4.14%	5.47%	6.79%	8.07%
	3	1.14%	1.70%	2.25%	3.33%	4.39%	5.42%	6.41%
	5	0.88%	1.30%	1.72%	2.53%	3.31%	4.06%	4.78%
	10	0.61%	0.91%	1.19%	1.73%	2.24%	2.72%	3.16%

- Annahmen:
  - Haltedauer: 10 Jahre
  - Volatilität: 12.50%

Illiquidity Premium Building Block: 1.00%

# Capital Market Assumptions

## Listed Real Estate CH – Modellierung

### Input

- Referenzindex:
  - Name: 50% SXI Real Estate Funds Broad + 40% SXI Real Estate Shares Broad + 10% FTSE 3M CHF Eurodeposit
  - Ticker: 50% SWIIT Index + 40% REAL Index + 10% SBWMSF3L Index

### Income Building Block

- Dividend Yield:
  - SWIIT Starting Dividend Yield: 2.30%
  - SWIIT Median Dividend Yield: 3.20%
  - REAL Starting Dividend Yield: 3.38%
  - REAL Median Dividend Yield: 3.88%

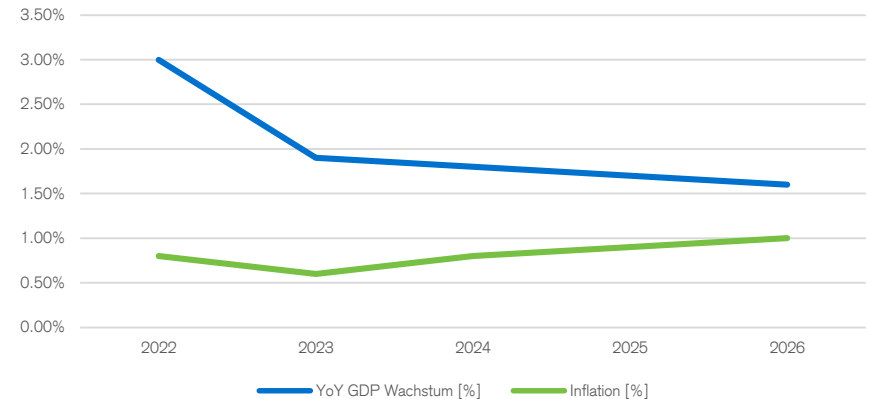
Income Building Block:  $0.50 \times 2.30\% + 0.50 \times 3.38\% = 2.84\%$

### Valuation Building Block

- Prämien Repricing Aktien:
  - Aktuelle Prämie: 20.00%
  - Median Prämie: 10.00%
  - Veränderung der Prämie:  $(1+10\%-20\%)^{1/5} - 1 = -2.09\%$
- Prämien Repricing Fonds:
  - Aktuelle Prämie: 40.00%
  - Median Prämie: 20.00%
  - Veränderung der Prämie:  $(1+20\%-40\%)^{1/5} - 1 = -4.36\%$

Valuation Building Block:  $0.50 \times -2.09\% + 0.50 \times -4.36\% = -3.23\%$

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 2.00% (Consensus)
- Erwartete Inflation: 0.80% (Consensus)

Earnings Growth Building Block:  $2.00\% + 0.80\% = 2.80\%$

# Capital Market Assumptions

## Listed Real Estate CH – CMA

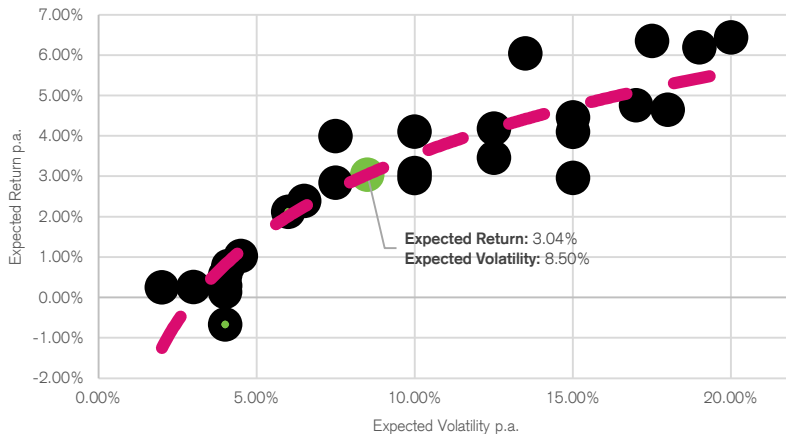
### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 8.50% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Earnings Growth Building Block wird nach unten korrigiert. Dies lässt sich durch eine Reduktion des «verwertbaren» GDP Wachstum auf 0.50% erklären.
  - Valuation Building Block wird nach oben korrigiert. Dies lässt sich durch eine nicht-lineare Bewertungsanpassung bei Immobilien erklären. Zinserwartung in CHF liegt unter 1.00%.

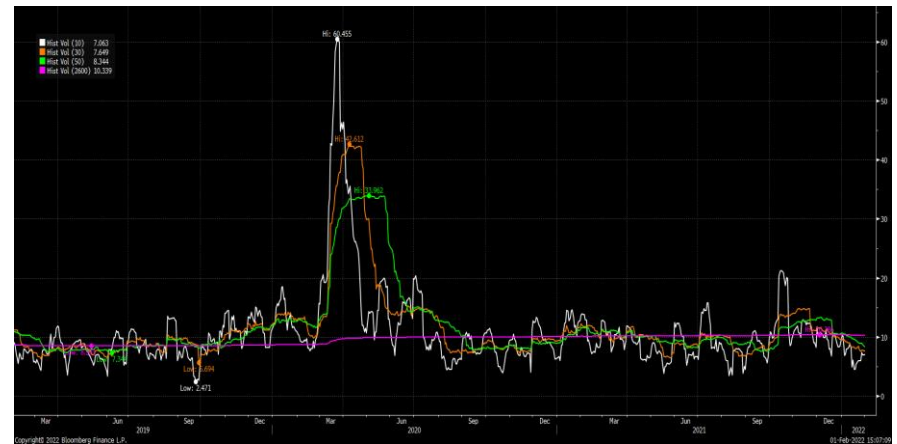
### Expected Return

2.84%	← Income
2.80% 1.30%	← Earnings Growth
-3.23% -1.00%	← Valuation
-0.10%	← Management Fees
3.04%	← Expected Return

### Capital Market Line



### Expected Volatility



# Capital Market Assumptions

## Private Real Estate CH – CMA

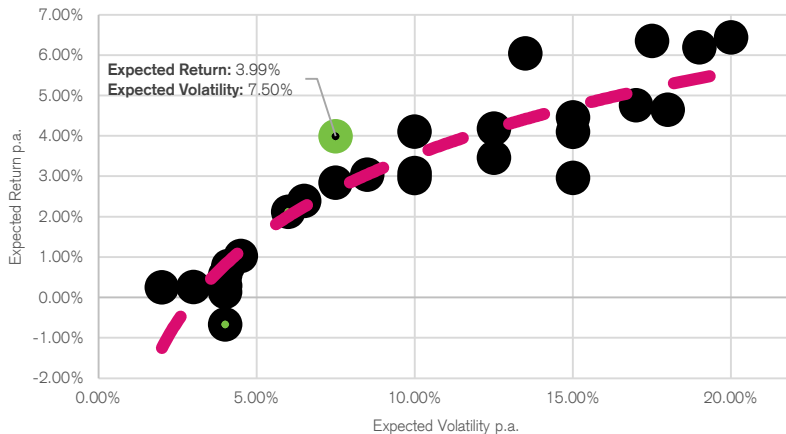
### Input

- Expected Return für «Listed Real Estate CH» wird als Ausgangspunkt zur Modellierung herangezogen.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Erhöhung der Management Fees.
- Es wird zusätzlich ein «Illiquidity Premium» modelliert.
- Die angenommene Volatilität wird auf 7.50% gesetzt.

### Expected Return

3.04%	← Listed Real Estate CH
1.00%	← Illiquidity Premium
-0.05%	← Management Fee Add-On
3.99%	← <b>Expected Return</b>

### Capital Market Line



### Illiquidity Premium Building Block

Haltedauer	Volatilität							
		5.00%	7.50%	10%	15%	20%	25%	30%
1		1.99%	2.99%	3.99%	5.98%	7.97%	9.95%	11.92%
2		1.40%	2.09%	2.78%	4.14%	5.47%	6.79%	8.07%
3		1.14%	1.70%	2.25%	3.33%	4.39%	5.42%	6.41%
5		0.88%	1.30%	1.72%	2.53%	3.31%	4.06%	4.78%
10		0.61%	0.91%	1.19%	1.73%	2.24%	2.72%	3.16%

- Annahmen:
  - Haltedauer: 10 Jahre
  - Volatilität: 7.50%

Illiquidity Premium Building Block: 1.00%

# Capital Market Assumptions

## Private Real Estate Non-CH PME – Modellierung

### Input

- Referenzindex:
  - Name: FTSE EPRA/NAREIT Developed Total Return Index
  - Ticker: RUGL Index

### Income Building Block

- Dividend Yield:
  - Starting Dividend Yield: 3.18%
  - Median Dividend Yield: 3.78%

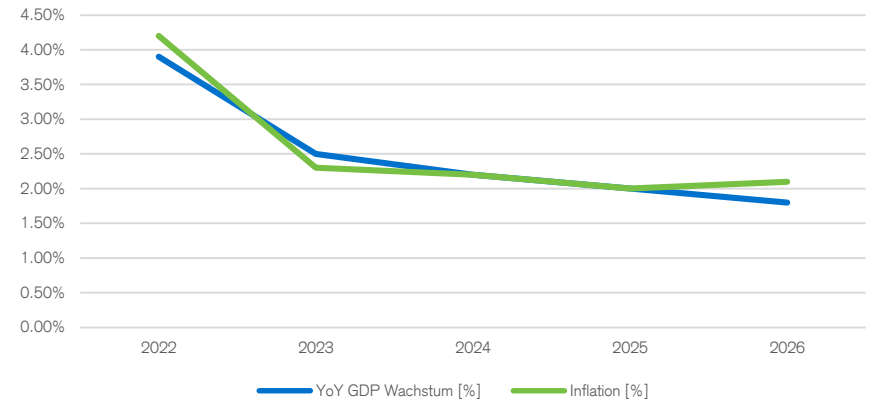
Income Building Block: 3.18%

### Valuation Building Block

- PE Repricing:
  - Aktuelles PE: 26.87
  - Median PE: 24.98
  - Veränderung des PE:  $[(24.98/26.87)^{1/5} - 1 = -1.45\%$

Valuation Building Block: -1.45%

### Earnings Growth Building Block



- Erwartetes GDP Wachstum: 2.50% (Consensus)
- Erwartete Inflation: 2.50% (Consensus)

Earnings Growth Building Block: 2.50% + 2.50% = 5.00%

# Capital Market Assumptions

## Private Real Estate Non-CH PME – CMA

### Input

- Expected Volatility wird anhand der historisch beobachtbaren Volatilität über die letzten 10 Jahre auf 10.00% gesetzt.
- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Income Building Block wird nach unten korrigiert. Dies lässt sich durch die angestrebte Qualität des Portfolios erklären («Core Real Estate»)
  - Earnings Growth Building Block wird nach unten korrigiert. Dies lässt sich durch eine Reduktion des «verwertbaren» GDP Wachstums auf 0.50% erklären.

### Expected Return

3.18%	2.50%	← Income
5.00%	3.00%	← Earnings Growth
-1.45%		← Valuation
-1.00%		← Hedging Cost
-0.10%		← Management Fees
2.95%		← Expected Return

### Capital Market Line



### Expected Volatility



Expected Volatility: 10.00%



# Capital Market Assumptions

## Private Real Estate Non-CH – CMA

### Input

- Es werden die nachfolgenden Anpassungen an den Building Blocks vorgenommen:
  - Erhöhung der Management Fees, da es sich um eine Privatmarktanlage handelt.
- Es wird zusätzlich ein «Illiquidity Premium» modelliert.
- Die angenommene Volatilität wird auf 10.00% gesetzt.

### Expected Return

2.95%	← Private Real Estate Non-CH PME
1.50%	← Illiquidity Premium
-0.35%	← Management Fee Add-On
4.10%	← <b>Expected Return</b>

### Capital Market Line



### Illiquidity Premium Building Block

		Volatilität						
Haltedauer		5.00%	7.50%	10%	15%	20%	25%	30%
	1	1.99%	2.99%	3.99%	5.98%	7.97%	9.95%	11.92%
	2	1.40%	2.09%	2.78%	4.14%	5.47%	6.79%	8.07%
	3	1.14%	1.70%	2.25%	3.33%	4.39%	5.42%	6.41%
	5	0.88%	1.30%	1.72%	2.53%	3.31%	4.06%	4.78%
	10	0.61%	0.91%	1.19%	1.73%	2.24%	2.72%	3.16%

- Annahmen:
  - Haltedauer: 10 Jahre
  - Volatilität: 10.00%

Illiquidity Premium Building Block: 1.50%