

Swiss Real Estate

Swiss housing market: vacancy rate dropping like a stone

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The first numbers published for individual cantons and municipalities suggest that the trend reversal in housing vacancies that began last year continues unabated.

The main reasons for the falling vacancy rate are the ongoing drop-off in construction activity and the sharp jump in demand on the back of economic growth and immigration.

The housing vacancy rate in major urban centres has also fallen, for the first time since 2013. That said, there are pronounced differences between the individual centres.

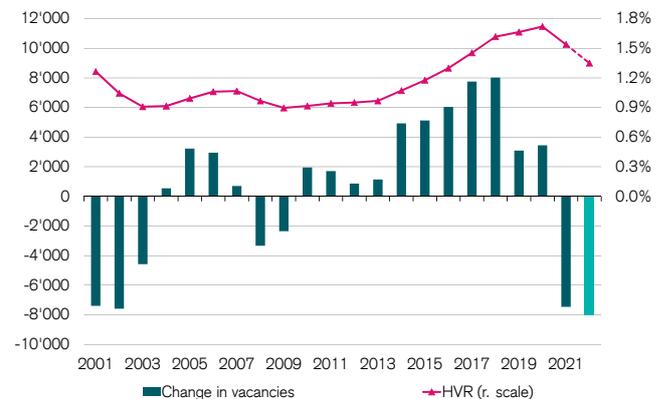
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Economist – Swiss Real Estate

Over the past few weeks, the first five cantons and individual municipalities have published their housing vacancy numbers for 2022. It is evident that the fall in the number of vacant dwellings – a trend that began last year – is continuing. This is especially true of the canton of Geneva (–26.1%), but the cantons of Vaud (–17.0%), Zurich (–15.5%) and Basel Land (–3.6%) are also reporting a drop in the number of vacant homes. Basel-Stadt, in which vacancies already bucked the trend last year by rising, has been the only canton so far to report another increase, which comes in at 7.5% this year. As at 1 June 2022, all in all 13.9% fewer homes were vacant across the five cantons compared to the previous year. This means that the decline in empty properties has accelerated versus 2021 (–8.0%).

Figure 1: Another fall in the number of vacant homes – by an estimated 8,000 units

Change in vacancies and housing vacancy rate (HVR); both as at 1 June; 2022: Credit Suisse estimate



Source: Swiss Federal Statistical Office, Credit Suisse; last data point: 1 June 2021

Housing vacancy rate set to fall to around 1.35%

The statistics on vacant homes compiled by the Swiss Federal Statistical Office in conjunction with the municipal authorities are based on a full survey and are therefore an established metric used in assessing the state of the Swiss residential property market. The municipalities calculate the number of vacant homes annually as per the cut-off date of 1 June. The results for the whole of Switzerland are set to be released in mid-September. Based on the data already published, as referred to above, and our monitoring of the supply and demand situation on the housing market, our conclusion is that the decrease in the housing vacancy rate that was observed last

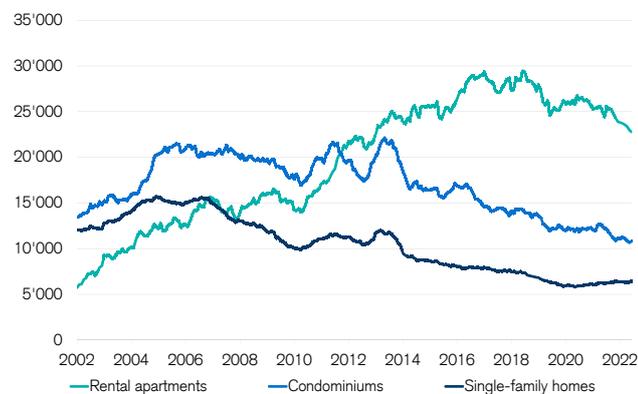
year – for the first time since 2009 – appears to have continued unabated. This would equate to a fall in the vacancy rate from 1.54% last year to around 1.35% in 2022, which would be the lowest reading for six years (see figure 1).

Fall in construction activity...

Construction activity, which passed its peak back in 2019 and has continued to shrink ever since, remains a key driver of the downtrend in the housing vacancy rate. Overall, 4,800 fewer permits were issued for the construction of homes in the last two years than in the two preceding years. Right now, building delays on account of supply bottlenecks and the sharp rise in construction prices may be temporarily exacerbating the downtrend.

Figure 2: Fewer homes are being built

Number of housing units with building permits (new builds) by use type, rolling 12-month total



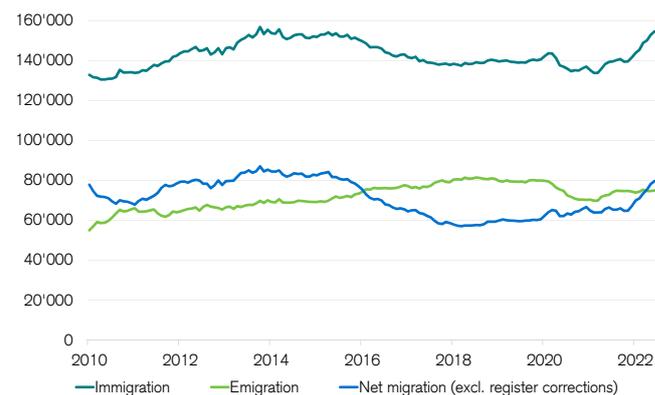
Source: Baublatt, Credit Suisse; last data point: June 2022

....amidst rising demand

At the same time, the demand for housing, which was barely dented by the pandemic, has continued to grow. We are currently seeing the convergence of several factors that are fuelling demand. As a result of the brisk economic recovery and the continued progress in overcoming the pandemic, more households are being established. Moreover, the demand for rental homes in particular is benefiting from immigration, which has risen again sharply this year (see figure 3). In the first half of the year alone, net migration of permanent foreign residents outstripped that of the prior-year period by some 12,000 persons. This figure does not include the approximately 55,000 refugees from the war in Ukraine. However, this group is unlikely to have played more than a minor role on the open residential market to date as most have been housed in publicly-funded accommodation provided by the national government and the cantons as well as in private households, at least for the first few months of their time in the country. Nevertheless, the longer those fleeing the conflict remain in Switzerland, the higher the demand they will generate on the market for rented housing.

Figure 3: Marked rise in net immigration

Permanent foreign resident population: immigration, emigration and net migration (rolling 12-month totals)



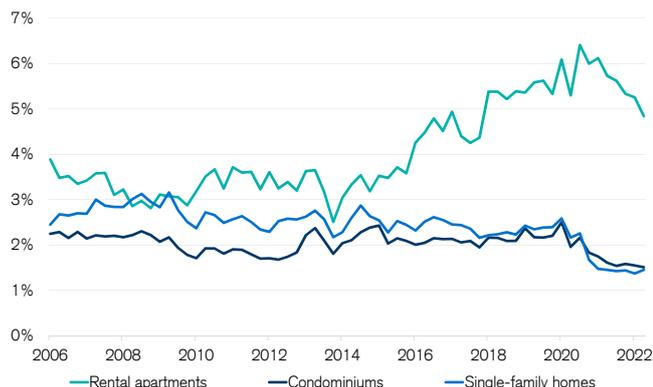
Source: State Secretariat for Migration, Credit Suisse; last data point: June 2022

Falling supply of housing

The trend reversal on the housing market is also reflected on the online property portals. Single-family houses and condominiums, which were already in short supply, became even more scarce in the course of the pandemic, and the supply rate¹ fell to around 1.5% in both ownership segments (see figure 4). This also explains the sharp price rises in owner-occupied residential property, which is currently exhibiting an annual growth rate of 7.9%. Owing to rising interest expense and what were already high price levels, we are now seeing demand ease in this area, and the supply of advertised properties has now stabilised. However, the housing vacancy rate for single-family homes and condominiums as at 1 June 2022 is likely to have plunged again year-on-year to only around 0.4%. The supply rate for rental properties has fallen even more sharply of late, having dropped below 5% in the second quarter of 2022 for the first time in four years. We estimate that around 2.2% of rental properties remain vacant (previous year: 2.5%). The decline will be a welcome development for some regions outside of the large conurbations that have suffered from excess supply in the past, while other regions should be increasingly affected by a shortage of housing. This is already reflected by the growth in rents. For example, the asking price index compiled by Wüest Partner on the basis of property advertisements rose by 0.6% year-on-year in the second quarter of 2022 after a five-year decline.

Figure 4: Scarcity of owner-occupied residential property, falling supply of rental apartments

Supply rate by segment, in % of the respective housing stock



Source: Meta-Sys, Credit Suisse; last data point: Q2 2022

Trend towards housing shortage set to continue

Moreover, the trend towards a shortage of housing is likely to continue beyond the current year as there is still no evidence of a pick-up in construction activity. Hog cycles – i.e. delayed reactions on the supply side to changes in demand – are a typical feature of the real estate markets. However, it is not unreasonable to suspect that the deficit in construction activity is partly due to structural factors, or in other words a growing shortage of land. Switzerland has seen the creation of ample new building land over decades via zoning, which led to an abundance of additional living space in greenfield areas. However, there has been a paradigm shift in recent years, driven by revisions to planning legislation as well as various cantonal and municipal initiatives. Instead of continuing to extend settlement areas at the expense of agricultural land and natural landscape, planners are now focusing on urban densification. The Swiss federal government also imposed temporary bans on zoning in several cantons until they adapted their strategic plans to the government's requirements. Reserves of urban brownfield sites that are suitable for major property developments are also largely depleted in many areas. The required densification has clearly taken place in recent years, although in many cases it has not been progressed quickly enough to meet the growing demand for living space. In other words, the options for outward expansion have been restricted, while high obstacles to densification projects remain in place in the form of restrictive building legislation, noise regulations and planning objections. While pressure on the authorities to lower these barriers is likely to rise, it will probably take considerable time before any amendments come into effect.

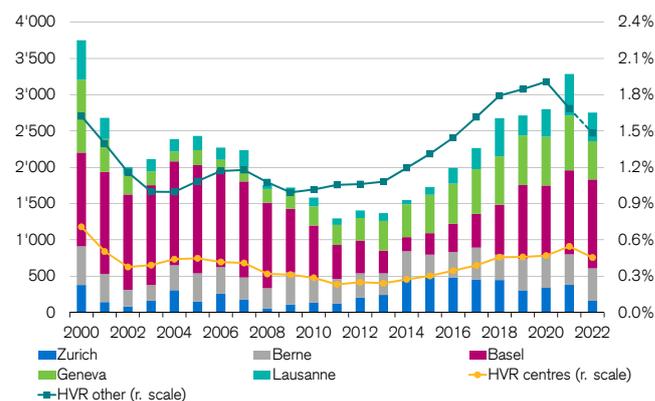
Turnaround has also begun in urban centres

Switzerland's five main urban centres have already published their housing vacancy rates as at 1 June 2022 (figure 5). After bucking the trend in Switzerland as a whole by rising

sharply overall in 2021 (+17.3%), vacancy rates in these areas are also beginning to see a reversal (-16.2%). This is the first time that vacancy rates have fallen since 2013. The slump in vacant dwellings is particularly high (-57.7%) in the city of Zurich, where the housing vacancy rate has plunged to a new ten-year low of 0.07%. The two large urban centres at Lake Geneva have also seen vacancy rates plummet by more than 30%, to reach marginally below 0.5% in both Lausanne and Geneva. Conversely, the cities of Berne and Basel have seen a modest increase to 0.57% and 1.19% respectively, which are the highest housing vacancy rates of all main urban centres in Switzerland. The probable causes of this turnaround are the renewed attractiveness of urban areas as the economy progressively recovers from the pandemic and, above all, the pronounced rise in immigration. As supply is likely to take time to respond to this trend (see above), the market situation looks set to become more strained in the coming years in the major cities and their conurbations.

Figure 5: Housing vacancy rates in large urban centres down for the first time since 2013

Trend in housing vacancy rates (HVR) in large urban centres and other municipalities (2022: estimate)



Source: Swiss Federal Statistical Office, cantonal and municipal statistical offices, Credit Suisse; last data point: 1 June 2022

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Please note:

- The supply rate measures homes advertised on online platforms as a share of the total housing stock. Unlike the housing vacancy rate, it is not bound by reference date and includes homes that are advertised but not vacant (e.g. advertisements for new tenants).

Glossary

Risk warnings

Emerging markets	Emerging markets are located in countries that possess one or more of the following characteristics: a certain degree of political instability, relatively unpredictable financial markets and economic growth patterns, a financial market that is still at the development stage or a weak economy. Emerging market investments usually result in higher risks as a result of political, economic, credit, exchange rate, market liquidity, legal, settlement, market, shareholder and creditor risks.
Hedge funds	Regardless of structure, hedge funds are not limited to any particular investment discipline or trading strategy, and seek to profit in all kinds of markets by using leverage, derivative instruments and speculative investment strategies that may increase the risk of investment loss.
Commodity investments	Commodity transactions carry a high degree of risk and may not be suitable for many private investors. The extent of loss due to market movements can be substantial or even result in a total loss.
Real estate	Investors in real estate are exposed to liquidity, foreign currency and other risks, including cyclical risk, rental and local market risk as well as environmental risk, and changes to the legal situation.
Currency risks	Investments in foreign currencies involve the additional risk that the foreign currency might lose value against the investor's reference currency.
Equity risk	Equities are subject to market forces and hence fluctuations in value, which are not entirely predictable.
Market risk	Financial markets rise and fall based on economic conditions, inflationary pressures, world news and business-specific reports. While trends may be detected over time, it can be difficult to predict the direction of the market and individual stocks. This variability puts stock investments at risk of losing value.
High Yield bond risk	High Yield Bonds are typically rated below investment grade or are unrated and as such are often subject to a higher risk of issuer default.
Perpetual bond risk	Perpetual Bonds have no maturity date and therefore the Interest pay-out depends on the viability of the issuer in the very long term.
Subordinated bond risk	In case of liquidation of the issuer, investors can only get back the principal after other senior creditors are paid.
Risk of bonds with variable/deferral of interest terms	Investors would face uncertainty over the amount and time of the interest payments to be received.
Callable bond risk	Investors face reinvestment risk when the issuer exercises its right to redeem the bond before it matures.
Risk of bonds with extendable maturity date	Investors would not have a definite schedule of principal repayment.
Convertible or exchangeable bond risk	Investors are subject to both equity and bond investment risk.
Cocos risk	The bond may be written-off fully or partially or converted to common stock on the occurrence of a trigger event.

Explanation of indices frequently used in reports

Index	Comment
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Australia S&P/ASX 200	S&P/ASX 200 is an Australian market-capitalization-weighted and float-adjusted stock index calculated by Standard and Poor's.
BC High Yield Corp USD	The US Corporate High Yield Index measures USD-denominated, non-investment grade, fixed-rate and taxable corporate bonds. The index is calculated by Barclays.
BC High Yield Pan EUR	The Euro Corporate Index tracks the fixed-rate, investment-grade, euro-denominated corporate bond market. The index includes issues that meet specified maturity, liquidity and quality requirements. The index is calculated by Barclays.
BC IG Corporate EUR	The US Corporate Index tracks the fixed-rate, investment-grade, euro-denominated corporate bond market. The index includes both US and non-US issues that meet specified maturity, liquidity and quality requirements. The index is calculated by Barclays.
BC IG Corporate USD	The IG Corporate Index tracks the fixed-rate, investment-grade, dollar-denominated corporate bond market. The index includes both US and non-US issues that meet specified maturity, liquidity and quality requirements. The index is calculated by Barclays.
Canada S&P/TSX comp	The S&P/TSX composite index is the Canadian equivalent of the S&P 500 Index in the USA. The index contains the largest stocks traded on the Toronto Stock Exchange.
Consumer Confidence Indices	Consumer Confidence Indices (CCIs) are based on surveys of consumers' spending intentions and economic situations, as well as their concerns and expectations for the immediate future.
CS Hedge Fund Index	The Credit Suisse Hedge Fund Index is compiled by Credit Suisse Hedge Index LLC. It is an asset-weighted hedge fund index and includes only funds, as opposed to separate accounts. The index reflects performance net of all hedge fund component performance fees and expenses.
CS LSI ex govt CHF	The Liquid Swiss Index ex govt CHF is a market-capitalized bond index representing the most liquid and tradable portion of the Swiss bond market excluding Swiss government bonds. The index is calculated by Credit Suisse.
DAX	The German Stock Index stock represents 40 of the largest and most liquid German companies that trade on the Frankfurt Exchange.
DXY	A measure of the value of the US dollar relative to the majority of its most important trading partners. The US Dollar Index is similar to other trade-weighted indices, which also use the exchange rates from the same major currencies.
Eurostoxx 50	Eurostoxx 50 is a market-capitalization-weighted stock index of 50 leading blue-chip companies in the Eurozone.
FTSE EPRA/NAREIT Global Real Estate Index Series	The FTSE EPRA/NAREIT Global Real Estate Index Series is designed to represent general trends in eligible real estate equities worldwide.
Hedge Fund Barometer	The Hedge Fund Barometer is a proprietary Credit Suisse scoring tool that measures market conditions for hedge fund strategies. It comprises four components: liquidity, volatility; systemic risks and business cycle.
Japan Topix	TOPIX, also known as the Tokyo Stock Price Index, tracks all large Japanese companies listed in the stock exchange's "first section." The index calculation excludes temporary issues and preferred stocks.
JPM EM hard curr. USD	The Emerging Market Bond Index Plus tracks the total return of hard-currency sovereign bonds across the most liquid emerging markets. The index encompasses US-denominated Brady bonds (dollar-denominated bonds issued by Latin American countries), loans and Eurobonds.
JPM EM local curr. hedg. USD	The JPMorgan Government Bond Index tracks local currency bonds issued by emerging market governments across the most accessible markets for international investors.
MSCI AC Asia/Pacific	The MSCI All Country Asia Pacific Index captures large and mid cap representation across 5 developed market countries and 8 emerging markets countries in the Asia Pacific region. With 1,000 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
MSCI AC World	The MSCI All Country World Index captures large and mid cap representation across 23 developed markets and 23 emerging market countries. With roughly 2480 constituents, the index covers around 85% of the global investable equity opportunity set.
MSCI Emerging Markets	MSCI Emerging Markets is a free-float-weighted Index designed to measure equity market performance in global emerging markets. The index is developed and calculated by Morgan Stanley Capital International.
MSCI EMU	The MSCI EMU Index (European Economic and Monetary Union) captures large and mid cap representation across the 10 Developed Markets countries in the EMU. With 237 constituents, the index covers approximately 85% of the free float-adjusted market capitalization of the EMU.
MSCI Europe	The MSCI Europe Index captures large and mid cap representation across 15 developed markets countries in Europe. With 442 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European developed markets equity universe.
MSCI UK	The MSCI United Kingdom Index is designed to measure the performance of the large and mid cap segments of the UK market. With 111 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.
MSCI World	MSCI World is an index of global equity markets developed and calculated by Morgan Stanley Capital International. Calculations are based on closing prices with dividends reinvested.
OECD Composite Leading Indicators	OECD Composite Leading Indicators (CLIs) are designed to provide early signals of turning points in business cycles with components that measure early stages of production, respond to changes in economic activity, and are sensitive to expectations of future activity.
Purchasing Managers' Indices	Purchasing Managers' Indices (PMIs) are economic indicators derived from monthly surveys of private-sector companies. The two principal producers of PMIs are Markit Group, which conducts PMIs for over 30 countries worldwide, and the Institute for Supply Management (ISM), which conducts PMIs for the United States. The indices include additional sub-indices for manufacturing surveys such as new orders, employment, exports, stocks of raw materials and finished goods, prices of inputs and finished goods, and services.
Russell 1000 Growth Index	The Russell 1000 Growth Index measures the performance of the large-cap growth segment of the US equity universe based on 1000 large-cap companies with higher price-to-book ratios and higher forecast growth values.
Russell 1000 Index	The Russell 1000 Index is a stock market index that represents the highest-ranking 1,000 stocks in the Russell 3000 Index (encompassing the 3,000 largest US-traded stocks, with the underlying companies all incorporated in the USA), and representing about 90% of the total market capitalization of that index. The Russell 1000 Index has a weighted average market capitalization of USD 81 billion and the median market capitalization is approximately USD 4.6 billion.
Russell 1000 Value Index	The Russell 1000 Value Index measures the performance of the large-cap value segment of the US equity universe based on 1000 large-cap companies with lower price-to-book ratios and lower expected growth values.
Switzerland SMI	The Swiss Market Index is made up of 20 of the largest companies listed of the Swiss Performance Index universe. It represents 85% of the free-float capitalization of the Swiss equity market. As a price index, the SMI is not adjusted for dividends.
UK FTSE 100	FTSE 100 is a market-capitalization-weighted stock index that represents 100 of the most highly capitalized companies traded on the London Stock exchange. The equities have an investibility weighting in the index calculation.
US S&P 500	Standard and Poor's 500 is a capitalization-weighted stock index representing all major industries in the USA, which measures the performance of the domestic economy through changes in the aggregate market value.

Abbreviations frequently used in reports

Abb.	Description	Abb.	Description
3/6/12 MMA	3/6/12 month moving average	IMF	International Monetary Fund
AI	Alternative investments	LatAm	Latin America
APAC	Asia Pacific	Libor	London interbank offered rate
bbl	barrel	m b/d	Million barrels per day
BI	Bank Indonesia	M1	A measure of the money supply that includes all physical money, such as coins and currency, as well as demand deposits, checking accounts and negotiable order of withdrawal accounts.
BoC	Bank of Canada	M2	A measure of money supply that includes cash and checking deposits (M1) as well as savings deposits, money market mutual funds and other time deposits.
BoE	Bank of England	M3	A measure of money supply that includes M2 as well as large time deposits, institutional money market funds, short-term repurchase agreements and other larger liquid assets.
BoJ	Bank of Japan	M&A	Mergers and acquisitions
bp	Basis points	MAS	Monetary Authority of Singapore
BRIC	Brazil, Russia, China, India	MLP	Master Limited Partnership
CAGR	Compound annual growth rate	MoM	Month-on-month
CBOE	Chicago Board Options Exchange	MPC	Monetary Policy Committee
CFO	Cash from operations	OAS	Option-adjusted spread
CFROI	Cash flow return on investment	OECD	Organisation for Economic Co-operation and Development
DCF	Discounted cash flow	OIS	Overnight indexed swap
DM	Developed Market	OPEC	Organization of Petroleum Exporting Countries
DMs	Developed Markets	P/B	Price-to-book value
EBITDA	Earnings before interest, taxes, depreciation and amortization	P/E	Price-earnings ratio
ECB	European Central Bank	PBoC	People's Bank of China
EEMEA	Eastern Europe, Middle East and Africa	PEG	P/E ratio divided by growth in EPS
EM	Emerging Market	PMI	Purchasing Managers' Index
EMEA	Europe, Middle East and Africa	PPP	Purchasing power parity
EMs	Emerging Markets	QE	Quantitative easing
EMU	European Monetary Union	QoQ	Quarter-on-quarter
EPS	Earnings per share	r.h.s.	right-hand side (for charts)
ETF	Exchange traded funds	RBA	Reserve Bank of Australia
EV	Enterprise value	RBI	Reserve Bank of India
FCF	Free cash flow	RBNZ	Reserve Bank of New Zealand
Fed	US Federal Reserve	REIT	Real estate investment trust
FFO	Funds from operations	ROE	Return on equity
FOMC	Federal Open Market Committee	ROIC	Return on invested capital
FX	Foreign exchange	RRR	Reserve requirement ratio
G10	Group of Ten	SAA	Strategic asset allocation
G3	Group of Three	SDR	Special drawing rights
GDP	Gross domestic product	SNB	Swiss National Bank
GPIF	Government Pension Investment Fund	TAA	Tactical asset allocation
HC	Hard currency	TWI	Trade-Weighted Index
HY	High yield	VIX	Volatility Index
IBD	Interest-bearing debt	WTI	West Texas Intermediate
IC	Credit Suisse Investment Committee	YoY	Year-on-year
IG	Investment grade	YTD	Year-to-date
ILB	Inflation-linked bond	Personal Consumption Expenditure (PCE deflator)	An indicator of the average increase in prices for all domestic personal consumption.

Currency codes frequently used in reports

Code	Currency	Code	Currency
ARS	Argentine peso	KRW	South Korean won
AUD	Australian dollar	MXN	Mexican peso
BRL	Brazilian real	MYR	Malaysian ringgit
CAD	Canadian dollar	NOK	Norwegian krone
CHF	Swiss franc	NZD	New Zealand dollar
CLP	Chilean peso	PEN	Peruvian nuevo sol
CNY	Chinese yuan	PHP	Philippine peso
COP	Colombian peso	PLN	Polish zloty
CZK	Czech koruna	RUB	Russian ruble
EUR	Euro	SEK	Swedish krona/kronor
GBP	Pound sterling	SGD	Singapore dollar
HKD	Hong Kong dollar	THB	Thai baht

HUF	Hungarian forint	TRY	Turkish lira
IDR	Indonesian rupiah	TWD	New Taiwan dollar
ILS	Israeli new shekel	USD	United States dollar
INR	Indian rupee	ZAR	South African rand
JPY	Japanese yen		

Important information on derivatives

Pricing	Option premiums and prices mentioned are indicative only. Option premiums and prices can be subject to very rapid changes: The prices and premiums mentioned are as of the time indicated in the text and might have changed substantially in the meantime.
Risks	Derivatives are complex instruments and are intended for sale only to investors who are capable of understanding and assuming all the risks involved. Investors must be aware that adding option positions to an existing portfolio may change the characteristics and behavior of that portfolio substantially. A portfolio's sensitivity to certain market moves can be heavily impacted by the leverage effect of options.
Buying calls	Investors who buy call options risk the loss of the entire premium paid if the underlying security trades below the strike price at expiration.
Buying puts	Investors who buy put options risk loss of the entire premium paid if the underlying security finishes above the strike price at expiration.
Selling calls	Investors who sell calls commit themselves to sell the underlying for the strike price, even if the market price of the underlying is substantially higher. Investors who sell covered calls (own the underlying security and sell a call) risk limiting their upside to the strike price plus the upfront premium received and may have their security called away if the security price exceeds the strike price of the short call. Additionally, the investor has full downside participation that is only partially offset by the premium received upfront. If investors are forced to sell the underlying they might be subject to taxing. Investors shorting naked calls (i.e. selling calls but without holding the underlying security) risk unlimited losses of security price less strike price.
Selling puts	Put sellers commit to buying the underlying security at the strike price in the event the security falls below the strike price. The maximum loss is the full strike price less the premium received for selling the put.
Buying call spreads	Investors who buy call spreads (buy a call and sell a call with a higher strike) risk the loss of the entire premium paid if the underlying trades below the lower strike price at expiration. The maximum gain from buying call spreads is the difference between the strike prices, less the upfront premium paid.
Selling naked call spreads	Selling naked call spreads (sell a call and buy a farther out-of-the-money call with no underlying security position): Investors risk a maximum loss of the difference between the long call strike and the short call strike, less the upfront premium taken in, if the underlying security finishes above the long call strike at expiration. The maximum gain is the upfront premium taken in, if the security finishes below the short call strike at expiration.
Buying put spreads	Investors who buy put spreads (buy a put and sell a put with a lower strike price) also have a maximum loss of the upfront premium paid. The maximum gain from buying put spreads is the difference between the strike prices, less the upfront premium paid.
Buying strangles	Buying strangles (buy put and buy call): The maximum loss is the entire premium paid for both options, if the underlying trades between the put strike and the call strike at expiration.
Selling strangles or straddles	Investors who are long a security and short a strangle or straddle risk capping their upside in the security to the strike price of the call that is sold plus the upfront premium received. Additionally, if the security trades below the strike price of the short put, investors risk losing the difference between the strike price and the security price (less the value of the premium received) on the short put and will also experience losses in the security position if they own shares. The maximum potential loss is the full value of the strike price (less the value of the premium received) plus losses on the long security position. Investors who are short naked strangles or straddles have unlimited potential loss since, if the security trades above the call strike price, investors risk losing the difference between the strike price and the security price (less the value of the premium received) on the short call. In addition, they are obligated to buy the security at the put strike price (less upfront premium received) if the security finishes below the put strike price at expiration.

Risk warning

Every investment involves risk, especially with regard to fluctuations in value and return. If an investment is denominated in a currency other than your base currency, changes in the rate of exchange may have an adverse effect on value, price or income.

This document may include information on investments that involve special risks. You should seek the advice of your independent financial advisor prior to taking any investment decisions based on this document or for any necessary explanation of its contents. Further information is also available in the information brochure "Risks Involved in Trading Financial Instruments" available from the Swiss Bankers Association.

Past performance is not an indicator of future performance. Performance can be affected by commissions, fees or other charges as well as exchange rate fluctuations.

Financial market risks

Historical returns and financial market scenarios are no reliable indicators of future performance. The price and value of investments mentioned and any income that might accrue could fall or rise or fluctuate. You should consult with such advisor(s) as you consider necessary to assist you in making these determinations.

Investments may have no public market or only a restricted secondary market. Where a secondary market exists, it is not possible to predict the price at which investments will trade in the market or whether such market will be liquid or illiquid.

Emerging markets

Where this document relates to emerging markets, you should be aware that there are uncertainties and risks associated with investments and transactions in various types of investments of, or related or linked to, issuers and obligors incorporated, based or principally engaged in business in emerging markets countries. Investments related to emerging markets countries may be considered speculative, and their prices will be much more volatile than those in the more developed countries of the world. Investments in emerging markets investments should be made only by sophisticated investors or experienced professionals who have independent knowledge of the relevant markets, are able to consider and weigh the various risks presented by such investments, and have the financial resources necessary to bear the substantial risk of loss of investment in such investments. It is your responsibility to manage the risks which arise as a result of investing in emerging markets investments and the allocation of assets in your portfolio. You should seek advice from your own advisers with regard to the various risks and factors to be considered when investing in an emerging markets investment.

Alternative investments

Hedge funds are not subject to the numerous investor protection regulations that apply to regulated authorized collective investments and hedge fund managers are largely unregulated.

Hedge funds are not limited to any particular investment discipline or trading strategy, and seek to profit in all kinds of markets by using leverage, derivatives, and complex speculative investment strategies that may increase the risk of investment loss.

Commodity transactions carry a high degree of risk, including the loss of the entire investment, and may not be suitable for many private investors. The performance of such investments depends on unpredictable factors such as natural catastrophes, climate influences, hauling capacities, political unrest, seasonal fluctuations and strong influences of rolling-forward, particularly in futures and indices.

Investors in real estate are exposed to liquidity, foreign currency and other risks, including cyclical risk, rental and local market risk as well as environmental risk, and changes to the legal situation.

Private Equity

Private Equity (hereafter "PE") means private equity capital investment in companies that are not traded publicly (i.e. are not listed on a stock exchange), they are complex, usually illiquid and long-lasting. Investments in a PE fund generally involve a significant degree of financial and/or business risk. Investments in private equity funds are not principal-protected nor guaranteed. Investors will be required to meet capital calls of investments over an extended period of time. Failure to do so may traditionally result in the forfeiture of a portion or the entirety of the capital account, forego any future income or gains on investments made prior to such default and among other things, lose any rights to participate in future investments or forced to sell their investments at a very low price, much lower than secondary market valuations. Companies or funds may be highly leveraged and therefore may be more sensitive to adverse business and/or financial developments or economic factors. Such investments may face intense competition, changing business or economic conditions or other developments that may adversely affect their performance.

Interest rate and credit risks

The retention of value of a bond is dependent on the creditworthiness of the Issuer and/or Guarantor (as applicable), which may change over the term of the bond. In the event of default by the Issuer and/or Guarantor of the bond, the bond or any income derived from it is not guaranteed and you may get back none of, or less than, what was originally invested.

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