MANAGEMENT REPORT.

Economic Report

GENERAL ECONOMIC CONDITIONS

- **» Global economic growth slowed once again**
- **» Brisk issuing activity on the Pfandbrief and covered bond markets**
- **» Property boom entered its tenth year**
- **» Sales record on the German commercial property market**

Economic development

The global economy lost more momentum in 2019 than was originally anticipated at the beginning of the year. Economic activity slowed to such an extent, particularly in the second half of the year, that in its January 2020 estimate the IMF assumed global GDP growth of just 2.9 percent for the year. The economy was especially influenced by continued weakness in industrial production and global trade. This slowdown in momentum was felt by both industrialised economies and emerging and developing economies. The weaker development of the US economy was particularly noticeable in industrialised economies.

Economic growth in the eurozone also slowed, with growth of just 1.2 percent achieved in 2019. Moderate economic growth in Germany and Italy in particular had a curbing effect. The eurozone's economy was mainly boosted by investment and government spending, whereas private consumption decreased.

At 0.6 percent, Germany experienced its lowest growth rate in five years. Consumption proved to be a mainstay of the economy. Investment also increased, however, especially investment in construction, which rose by 3.8 percent. The greatest impetus came from civil engineering and residential construction. On the other hand, industrial economic performance declined – with the exception of the construction industry.

The average inflation rate decreased to 1.4 percent. This is primarily attributable to energy and food prices, which only increased moderately overall. The labour market was quite stable, in spite of the economic slowdown. The number of people in employment increased by an annual average of around 400,000, to 45.3 million. Unemployment dipped again to an average of under 2.3 million, equating to 73,000 fewer unemployed than in the previous year. The unemployment rate decreased by 0.2 percentage points, to 5.0 percent.

Financial markets

In spite of the weak economy, the stock markets posted significant gains. This was predominantly attributable to a low price base at the start of the year, a lack of investment alternatives and the low interest rate policy of central banks. The latter largely responded to the weak economy and low inflation data with expansionary monetary policy measures.

Of particular note, the US Federal Reserve ("Fed") changed its interest rate policy and cut the federal funds rate three times during the year, by 0.25 percentage points each time, most recently to a range of 1.5 to 1.75 percent. The Fed stopped reducing its total assets on 1 August; this means that all maturing securities are currently reinvested in the market.

The ECB reduced its deposit rate by 0.1 percentage point in September, to minus 0.5 percent. The main refinancing rate remained unchanged at 0.0 percent. The ECB also reactivated its asset purchase programme. As a result, new purchases have totalled €20 billion a month since November 2019, in addition to the maturing securities.

Other central banks, such as the Bank of Japan and the Swiss National Bank, have not changed their interest policy and have kept key financing rates at their previous low levels. Despite

YIELD ON TEN-YEAR BUNDS 2019
IN %

Source: Bloomberg (closing rate)

higher inflation data the Bank of England also left its base rate unchanged at 0.75 percent, as the economic outlook was uncertain due to the Brexit discussions and the trade dispute between the EU and the USA.

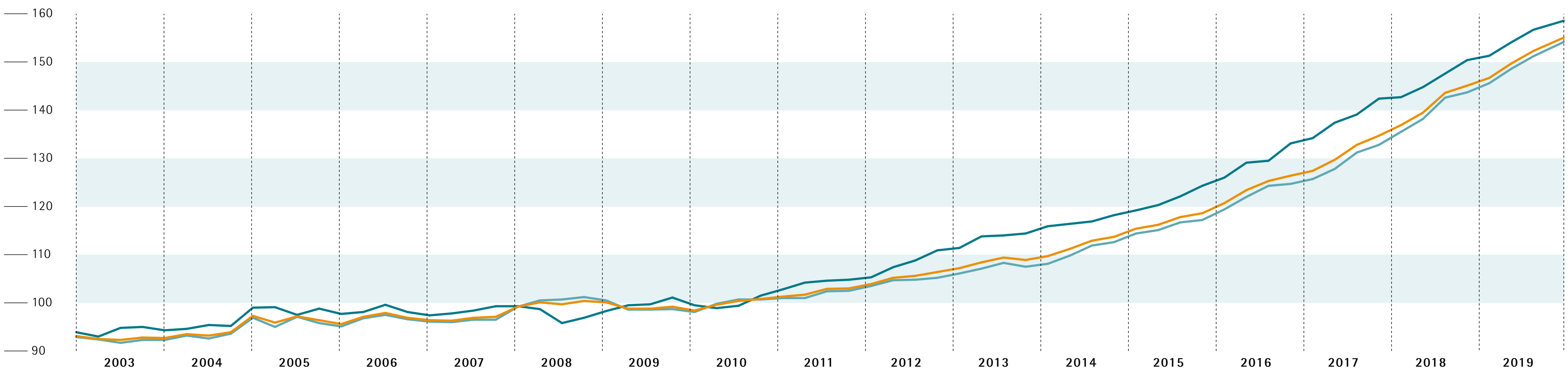
On the bond market, sluggish economic development and low inflation rates led to significantly declining yields during the year. Ten-year Bunds fell to a low of minus 0.74 percent at the start of September. Due to an easing of tension in the trade dispute between the USA and China, as well as the consensus on a Brexit agreement, by the end of the year the yield on 10-year Bunds increased again, to minus 0.185 percent.

On foreign exchange markets, the US dollar appreciated by and large, benefitting from the more robust state of the US economy in comparison with Europe and higher money market interest rates. At the end of the year, the euro was quoted at US$1.12, compared with US$1.15 at the start of the year. The Swiss franc also appreciated against the euro over the year, from CHF 1.13 to CHF 1.09 by the end of the year. Weaker economic data and political uncertainties in Europe put more pressure on the euro, while the Swiss franc benefitted from its status as a "safe haven". Sterling, meanwhile, came under pressure due to Brexit negotiations and the potential implications of Brexit for the UK's economic development, with the euro quoted at GBP 0.93 in mid-August.

The pound rose sharply at the end of the year following Boris Johnson's landslide victory and the clearer Brexit outlook, and at year-end was quoted at GBP 0.846 against the euro.

A significant widening of spreads on the covered bond market at the start of the year was reversed by another fall in interest rates. In the second half of the year, the primary market was increasingly characterised by negative yields. Longer maturities were therefore also placed in benchmark format in 2019, as these were generating positive yields. Furthermore, in spite of temporarily suspending its purchase programme, the ECB influenced the environment in the benchmark segment. In September, the ECB announced plans to resume its purchase

DEVELOPMENT OF PROPERTY PRICES IN GERMANY
YEAR 2010 = 100



Owner occupied housing
Condominiums
Single family houses

vdpResearch GmbH calculations based on information provided by vdp transaction databank
As of: February 2020

programme for covered bonds from November, which it did from this point, increasing the ECB's share of primary market issues accordingly.

Overall, issuing activity on the primary market was once again very brisk. Benchmark covered bonds denominated in euros were issued to a volume of €135 billion. The issue volume was thus at the previous year's level. German issuers accounted for the largest share, followed by French issuers.

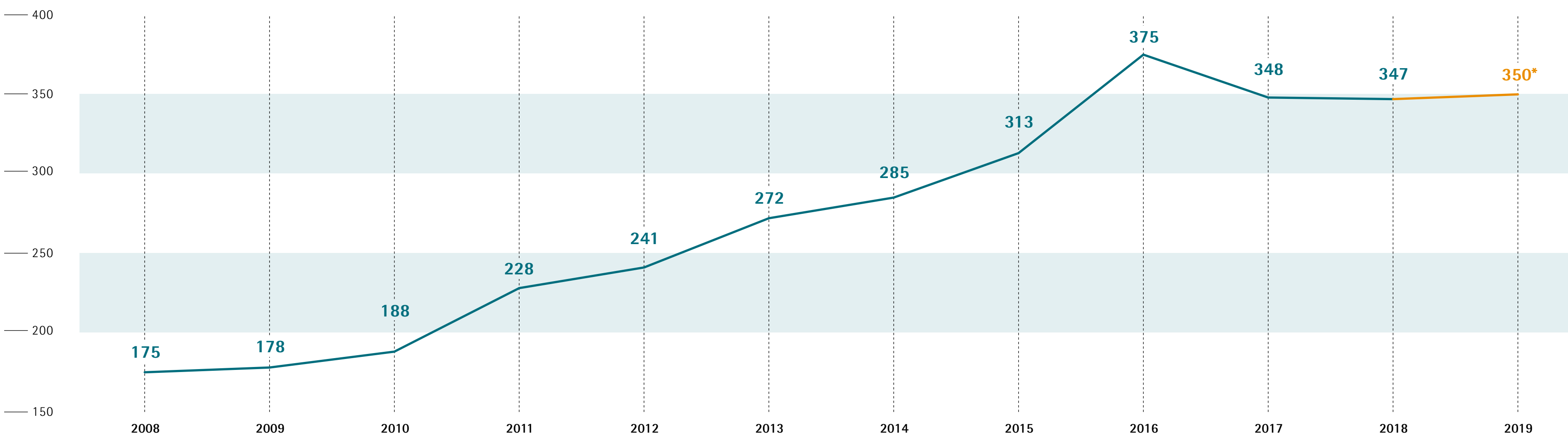
Property and property financing markets

Residential property – Germany

The upturn on the German housing market continued. Purchase prices and rents for houses and apartments increased significantly overall for the tenth year in succession. However, growth rates were lower compared with 2018. The Association of German Pfandbrief Banks (vdp) calculated an increase of 6.5 percent in its vdp property price index for 2019, compared with the previous year. The greatest price increase was calculated for single and two-family houses, which saw a rise of 7.0 percent. Multi-family house prices increased by 6.2 percent, while condominium prices rose by 5.9 percent. Price growth slowed continuously during the course of the year in Germany's seven largest cities, losing considerable momentum compared with the high growth rates of the previous year of around 10 percent, to rates of 3.9 percent for owner-occupied residential property and 4.2 percent for multi-family houses. Rental price growth also slowed, totalling 4.5 percent for multi-family houses across Germany, and 3.1 percent in the top seven cities, according to the calculations of vdpResearch.

The increase in prices for residential properties is still attributable to strong demand and a growing housing shortage in high-growth regions. More than 340,000 new housing units a year are needed in Germany between 2020 and 2021. In 2019, the construction industry reported the completion of around 300,000 new housing units. As a result, the construction backlog – in other words, permitted building projects that have not yet been reported as completed – has increased further, from more than 650,000 to over 693,000 housing units. One main reason for this is the high utilisation level of construction companies. This trend is also reflected in the level of building permits granted. In the first eleven months

RESIDENTIAL BUILDING PERMITS IN GERMANY 2008–2019
FIGURES IN 000



* Estimated.

Source: German Federal Statistical Office

of the year, a total of around 320,000 housing units were approved in Germany, which is just slightly higher than the previous year.

The German residential property market remained attractive to institutional investors. Ernst & Young calculated a transaction volume of €18.8 billion for residential property portfolios in 2019, which is €1.2 billion or 7 percent higher than the previous year. The institutional housing market continued to be dominated by domestic investors, who collectively accounted for more than 90 percent of turnover. Almost half of the transaction volume was attributable, in line with the previous year, to the top seven cities, with Berlin, at €4.2 billion, accounting for around a fifth of the total transaction volume.

Due to the continued strong demand for residential properties, new business in property financing once again increased. The vdp estimates an increase of around 5 percent for 2019, to around €240 billion. In addition to the high demand for apartments and houses, this is primarily attributable to the further rise in purchase prices. Thus, according to the findings of the vdp, the debt burden ratio of residential property financing increased to over 80 percent on average in 2019. The debt burden ratio – ratio of interest and principal payments to income – has also increased. This shows that interest rates, despite dropping to new lows in 2019, can no longer offset the increase in property prices.

Given the ongoing price dynamics on the residential property market, discussions on possible property market overvaluation and formation of price bubbles continued in 2019. In its most recent Financial Stability Review, the Deutsche Bundesbank warned again about recoverability risks for properties serving as collateral, which may arise from regional overvaluations of property. On the whole, however, the Bundesbank does not as yet see any "evidence of a spiral of sharply rising house prices and residential real estate loans combined with an erosion of lending standards which would jeopardise financial stability".

In order to counteract potential risks from low interest rates and high valuations on the property market, in July 2919 BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht – Federal Financial Supervisory Authority), upon the recommendation of the Financial Stability Committee, activated a countercyclical capital buffer, which the banks must fulfil by no later than July 2020. This countercyclical capital buffer must be met in addition to the existing capital requirements.

Residential property – international
Overall, European residential property markets performed positively in 2019. House prices increased in almost all EU member states, with only Italy recording a slight decline. Compared with the same period of the previous year, the upturn in prices slowed slightly in the first six months of 2019, although prices still grew by 4.2 percent in the second quarter of 2019 compared with the same quarter of the previous year, according to Eurostat.

The trend on the Swiss housing market was cautious. Although low interest rates and a resulting shortage of investment alternatives did create good demand for property, the vacancy rate increased to an average of 1.7 percent at the end of the second quarter of 2019, due to the continued high level of construction activity for rental properties. The country's highest vacancy rates were recorded in Ticino and Eastern Switzerland, and the lowest in the cantons of Geneva, Basel, Zug and the city of Zurich. Quoted rents therefore decreased further and, as a national average, were around 1 percent lower year-on-year at the end of the third quarter of 2019. There was only a slight increase in purchase prices for houses and apartments in 2019, as property prices have now risen to such a high level that fewer and fewer households can afford to buy their own home. This is particularly evident from the declining home ownership rate. Interest rates on the property financing market fell to new lows in the year under review. Many lenders in Switzerland also granted 10-year fixed-rate mortgages at interest rates of less than 1 percent. Demand was therefore particularly strong for mortgages with long fixed-interest periods. According to the Swiss National Bank, mortgage portfolios grew by around 3 percent overall, as in previous years. On the other hand, regulatory capital requirements increasingly posed an obstacle for private households.

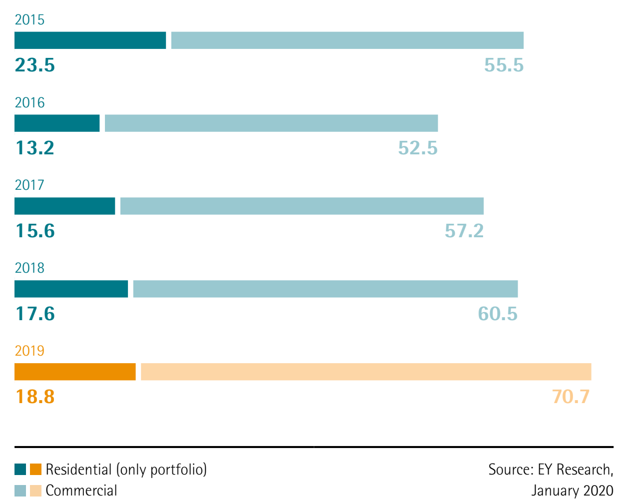
In the third quarter of 2019 house prices in Austria increased by 6.2 percent compared with the previous year. Around 65,000 new homes were built in Austria in 2019, which roughly meets the demand for new housing space. Demand varies greatly from region to region. Prices for owner-occupied homes and condominiums in Vienna doubled over the last ten years, while prices in Austria as a whole increased by 80 percent in the same period. In Vienna in particular, excess demand is due to new high-rise apartment buildings.

Commercial property – Germany
It was another record year for the German commercial property market, contrary to the expectations of many experts. According to Ernst & Young, the volume of transactions increased by 17 percent, to €70.7 billion. Continued low interest rates and high investment pressure ensured that demand remained strong. The significant increase in the volume of transactions is, however, primarily due to the increase in large-scale transactions and a dynamic, high-revenue final quarter.

More than 50 percent of the transaction volume is due to investments in office buildings, which have remained the most popular asset class. Office prime yields (net) declined to 2.9 percent, due to the strong investment pressure in property hotpoints. Office buildings in Berlin and Munich generated the lowest prime yields.

Just over 4 million square metres of office space was let in the top seven cities, an increase of 1.6 percent year-on-year. The highest office space turnover was achieved in Munich and Berlin. Berlin also had the lowest vacancy rate, of 1.8 percent. Vacancy rates were also down overall in Germany's

DEVELOPMENT OF COMMERCIAL PROPERTY TRANSACTIONS IN GERMANY 2015–2019
IN € BILLION



Source: EY Research, January 2020

biggest cities. The demand for office space was also boosted by further rises in employment figures.

Decreasing vacancies combined with relatively little new construction activity resulted in a significant increase in new rental contracts for office space in 2019, with the highest rent increases recorded in Cologne, at 10.6 percent, and Berlin, at 8.8 percent. The relative shortage of space in city centres led to a shift in letting activities to sub-markets outside but in close proximity to city centres. As a result, premium rent prices in the major cities increased to a lesser extent in city centres than the average rent prices in other sub-markets.

Retail properties remained the second-largest asset class, with a share of 17 percent of the transaction volume, but at around €13 billion were only slightly above the investment volume of the previous year. This is primarily attributable to the impact from structural changes in the retail segment due, among other things, to tougher competition from online trading, as well as a stronger focus on the gastronomy and leisure segments. This was particularly evident from the net initial yields for shopping centres. Over the course of the year, prime yields for shopping centres in Germany increased by 40 basis points to 4.5 percent on a net basis. This is the only type of usage in Germany where investors became more cautious in 2019 and for which higher returns were recorded.

Commercial property – international

In 2019, institutional investors acquired commercial property throughout Europe with a volume of €281 billion. This corresponds to an increase of 2.6 percent year-on-year. Once again, this result was driven particularly by the high level of investment activity in Germany.

The continued dominance of office properties on the investment market is due to the very healthy state of office markets in many countries. Although turnover of office space declined slightly in Europe, by around 4 percent compared with the previous year, leased office space still totalled 9.6 million square meters. The reason for this development was a lack of suitable office space. Across Europe, only 5.6 percent of office space was vacant, which is the lowest vacancy rate since 2002. In light of this development, rental prices increased by 6.2 percent.

The volume of transactions in the UK decreased to around €36 billion in 2019. In comparison, in 2015, the year before the Brexit referendum, around twice as much was invested in commercial property in the UK. While uncertainties concerning the impact of Brexit were already having an adverse effect on the investment market for commercial property in the UK, so far the office rental market has shown no signs of a downturn. The vacancy rate in London continued to decline. A relative shortage of space, coupled with sustained high demand, was clearly reflected in prime rents, which increased by 14 percent in the City of London. An opposite trend is evident for retail properties, particularly in regional markets. The UK accounts for the largest e-commerce share of retail sales in Europe, which is now reflected in rising vacancy rates and a decline in retail rents for new lettings.

The French investment market proved to be robust, with a transaction volume of around €37 billion, and for the first time recorded a higher investment volume for commercial property than the British market. The office property market was also the most significant segment in France, with a share of over 64 percent of the investment volume. Three quarters of market activity was attributable to the Greater Paris area, which benefitted from a substantial increase in employment. Turnover in floor space during the first nine months of 2019 amounted to 1.7 million square metres, and the vacancy rate fell to 4.8 percent.

A positive economic trend also boosted the commercial property market in the Netherlands. A transaction volume of around €18.4 billion was achieved on the investment market, with the vast majority of investment coming from international investors. The focus was on office properties. Office space was in short supply due to the high level of demand. At the end of the year, the vacancy rate in the Amsterdam area decreased to 5.5 percent.

In Spain, a total of €14.3 billion was invested in commercial property in 2019, with Madrid alone accounting for 80 percent of this amount, and Barcelona for a further 17 percent. Office buildings was also the most important usage type in Spain, followed by multi-family houses and retail properties. Compared internationally, the Spanish retail sector is considered relatively resistant to online trading, because the shopping experience is considered more important there than in other countries. As a result, many investors in commercial property remained interested in Spanish cities, which promised stable rental income and future growth potential.

The US commercial investment market enjoyed a substantial inflow of capital. A total of around US$540 billion was invested in the first three quarters of 2019, 6.4 percent more than the prior-year period. The logistics and industrial property asset classes saw the largest increases, while the increase in transaction volume for office properties was much more moderate, due to investor reticence in view of the already well advanced cycle on the user market. Nevertheless, rental growth continued in all sub-markets of relevance to MünchenerHyp – Boston, Chicago, Los Angeles, New York, San Francisco, Seattle and Washington D.C. The vacancy rates in these top markets also decreased year-on-year. By contrast, around 14.2 percent of existing office space nationwide was vacant at the end of 2019.

BUSINESS DEVELOPMENT

» **New mortgage business develops dynamically and reaches new record volume of EUR 6.5 billion**
» **Entry into Austrian market with private property financing**
» **Great investor demand for benchmark mortgage Pfandbriefe from MünchenerHyp**
» **MünchenerHyp is the first foreign issuer of an Additional Tier 1 bond in Switzerland**

New mortgage business

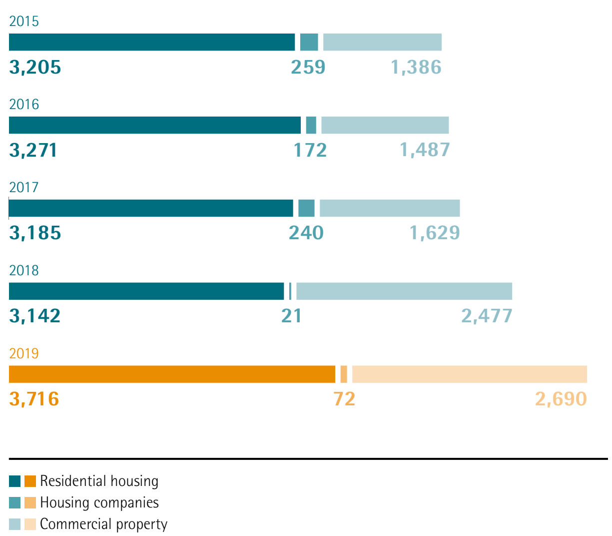
MünchenerHyp acquired by far the highest amount of new business in the Bank's history during the year under review. We increased the previous year's record result by 15 percent to €6.5 billion (2018: €5.6 billion). The volume of lending commitments thus significantly exceeded the forecast given in last year's annual report. We achieved double-digit growth rates in both the private residential property financing and the commercial property financing business areas.

New private residential property financing business increased by 18 percent, to €3.7 billion (previous year: €3.1 billion). Most of this growth was attributable to business with the cooperative banks within the German Cooperative Financial Network. We achieved a result of €2.8 billion, which equates to an increase of around €400 million, or 17 percent, year-on-year. Our cooperative partner banks have never before brokered such a high volume of financing on our behalf. Intensified market cultivation efforts, expansion of the higher-volume financing segment – select and individual business – and the introduction of digital processes had a positive impact on business development. Our sales campaigns were thus even more successful than in the previous year. Due to an increase in sales activities and improved internal processes, demand for our higher-volume financing up to €1 million increased by almost 50 percent. We also benefitted from strong demand for property financing driven by historic interest rate lows.

Sales of private property finance generated via independent financial service providers in Germany increased by 30 percent year-on-year, to €657 million.

In partnership with PostFinance in Switzerland, we increased new business slightly, as planned, with a new commitment volume of €290 million. The expansion of our product range was well received by Swiss customers. We now offer fixed interest rate periods of up to 15 years and forward periods up to 18 months before the end of the fixed interest period. This has enabled us to consolidate our position amid still very fierce competition on the Swiss finance market. This was also evident in the level of loan agreement extensions, which we increased by 12 percent, to €437 million.

MÜNCHENERHYP NEW MORTGAGE BUSINESS 2015–2019
COMMITMENTS IN € MILLION



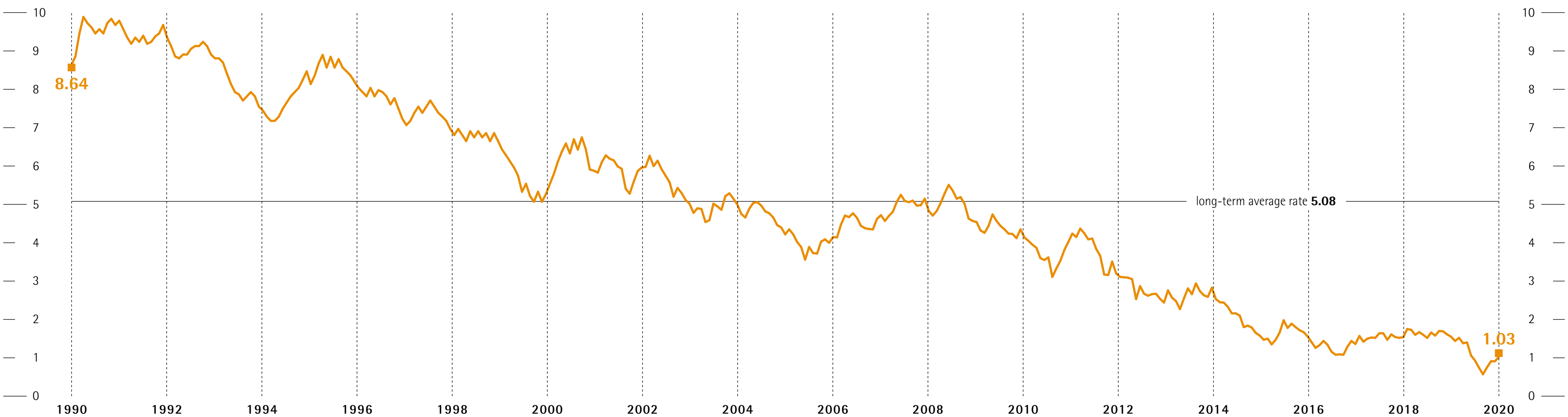
We entered the Austrian market in mid-2019, where our financing is aimed at private individuals resident in Austria and is secured by properties located in Austria. We sold our products through independent financial service providers who specialise in property finance advice. Initial contracts concluded during this market entry phase amounted to €8 million.

We have been very successful in commercial property financing. The volume of new business exceeded the €2 billion mark for the second time in succession since the financial market crisis. In total, we granted commercial property financing to the tune of €2.8 billion. This corresponds to an increase of 11 percent over the previous year's result of €2.5 billion and was achieved in spite of a high level of competition. Development of new business was also positive from an earnings perspective. This positive trend is attributable to a number of high-volume underwriting transactions, which were subsequently syndicated mainly in the Cooperative Financial Network.

Domestic business in particular contributed to this result, which grew by 40 percent, to €1.9 billion. This was mainly due to the financing we issued to our customers in Southern Germany. International business declined by 22 percent compared with the previous year, to €0.9 billion, with the USA (syndicated business only) once again accounting for the largest share, at 34 percent. Spain and the Netherlands were next in line, contributing around 25 percent each, followed by France, with around 10 percent.

High market prices resulting from the advanced price cycle were challenging for investors and financiers. From a risk perspective, we maintained our conservative financing approach,

MORTGAGE RATES MÜNCHENERHYP
TEN YEAR FIXED RATE | IN %



As of: 02.01.2020

focussing on traditional financing at completion. We consider the consistently high equity ratios in financing structures to be a positive aspect. In terms of the sustainable profitability of the financed properties, we paid particular attention to adequate, sustainable cash flows.

Capital markets business

Strict regulatory requirements and low asset spreads continued to dictate our strategy for investing in securities issued by the public sector and banks. LCR eligible securities continue to trade at expensive spread levels. In the current environment, purchasing sovereign and bank securities with strong credit ratings would result in net total asset costs and was therefore subject to major restrictions.

On a net basis, the portfolio volume was reduced by €0.4 billion, to €4.1 billion. New business in 2019 totalled €44.5 million, compared with €7 million in 2018.

Refinancing

The focus of refinancing in 2019 was once again on the issuance of Mortgage Pfandbriefe, in euros as previously, and in Swiss francs to a much greater extent.

Bonds issued in Swiss francs serve to refinance our property financing in Switzerland in the matching currency. Our total issue volume in Swiss francs was CHF 2.1 billion.

From this amount, we sold Mortgage Pfandbriefe with a total volume of around CHF 1.9 billion, making MünchenerHyp the largest foreign issuer of covered bonds in Switzerland in 2019.

Around CHF 870 million of this amount was placed via benchmark issues that had been newly issued or tapped, and around CHF 1 billion via private placements. In addition, a senior preferred note to the value of CHF 100 million was issued in October.

High-volume refinancing activities in euros started with a tap issue of an existing Mortgage Pfandbrief in February. To this end, the nominal volume of the bond maturing in November 2027 was increased by €250 million to €750 million. This transaction met with keen investor interest.

In April 2019, we very successfully issued a benchmark Mortgage Pfandbrief of €500 million with a 20-year term. This is the longest maturity ever issued in benchmark format on the Pfandbrief market. There was exceptionally strong investor demand for the issue. The order book was closed after one hour, at more than €3 billion. The coupon is 1.0 percent. The Pfandbrief was placed at a price of 7 basis points above the mid-swap rate.

At the beginning of the second half of the year, we issued another benchmark Mortgage Pfandbrief – also very successfully – with a volume of US$600 million and a term of three years and four months. The covered security has a coupon of 2.0 percent. The order book exceeded US$1.2 billion. The issue volume was spread over 31 individual orders from eleven countries. Almost 70 percent of investors were from outside Germany.

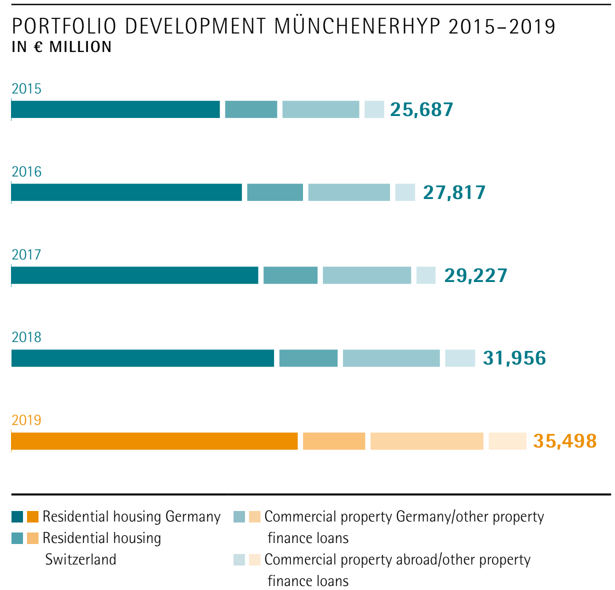
In August 2019, we issued a Mortgage Pfandbrief in the amount of €500 million with a short term of four years and a significantly negative yield. Demand for this issue was particularly high internationally, with the order book closing at almost €900 million. The coupon is 0.01 percent. The yield amounts to minus 0.567 percent. The issue was placed at a price of 2 basis points below the mid-swap rate.

In November 2019, MünchenerHyp became the first foreign issuer to issue an Additional Tier 1 bond in Swiss francs in Switzerland. This issue was a huge success and was significantly oversubscribed. The bond amounts to CHF 125 million and has a coupon of 3.125 percent. This is the lowest coupon for a publicly placed Additional Tier 1 bond of a German issuer. The term is indefinite. The bond may not be called until June 2025 at the earliest. More than 80 percent of the issue volume was subscribed in Switzerland. On the one hand, the bond serves as backing for the mortgage business in Switzerland. On the other, it optimises MünchenerHyp's equity structure with respect to the regulatory requirements for additional Tier 1 capital.

MünchenerHyp's total issue volume on the capital market in the year under review was around €6.1 billion. In the case of covered refinancing, Mortgage Pfandbriefe accounted for €4.8 billion, uncovered refinancing accounted for €1.2 billion and the Additional Tier 1 bond accounted for around €114 million (CHF 125 million). Once again, no Public Pfandbriefe were issued, in keeping with the Bank's business strategy.

NET ASSETS, FINANCIAL POSITION AND FINANCIAL PERFORMANCE

» **Portfolio in mortgage financing increases to EUR 35.5 billion**
» **MünchenerHyp remains well capitalised with Common Equity Tier 1 ratio of 19.8%**
» **Net interest income rises to around EUR 300 million**
» **Earnings from ordinary activities on a par with the previous year at EUR 73.6 million**



Balance sheet structure

Total assets increased to €42.9 billion at the end of financial year 2019, compared with €40.4 billion at 31 December 2018. This increase is once again due to continued strong new business.

During the course of the year, the mortgage loan portfolio grew by €3.5 billion, to €35.5 billion. Private residential property financing in Germany was once again the fastest growing segment, with growth of €1.6 billion.

The private residential property financing portfolio is structured as follows: domestic – €19.7 billion (previous year: €18.1 billion); foreign – €4.7 billion (previous year: €4.4 billion). In addition to the financing business in Switzerland, this portfolio also includes financing in Austria for the first time. The commercial property financing portfolio totals €11.1 billion (previous year: €9.5 billion). Of this amount, €3.0 billion (previous year €2.4 billion) is attributable to financing outside Germany. The most important international market is the USA, with 21 percent (previous year: 19 percent), followed by the UK and France, with 18 percent each (previous year: 21 percent and 17 percent respectively), and the Netherlands, with 17 percent (previous year: 17 percent).

In line with our business and risk strategy, the portfolio of public-sector and bank loans and securities decreased from €4.5 billion to €4.1 billion, €2.0 billion of which was made up of securities and bonds.

At the end of 2019, the net sum of unrealised losses and unrealised gains in the securities portfolio amounted to plus €47 million (previous year: plus €41 million). These figures include unrealised losses of €0 million (previous year: €1 million) arising from securities issued by countries located on the periphery of the eurozone and banks domiciled in these countries. These securities had a total volume of €0.2 billion at the end of 2019 (previous year: €0.3 billion).

A detailed examination of all securities indicated that there are no permanent impairments. We have accounted for these bonds on a held-to-maturity basis. Write-downs to a lower fair value were not necessary.

The portfolio of long-term refinancing instruments increased by €1.7 billion to €36.4 billion. Mortgage Pfandbriefe accounted for €26.6 billion of this amount, Public Pfandbriefe for €2.2 billion and unsecured bonds for €7.5 billion. The total volume of refinancing instruments – including money market funds and customer deposits – increased from €37.9 billion in the previous year to €40.2 billion as of 31 December 2019.

The item "Other liabilities to customers" can be broken down as follows:

OTHER LIABILITIES TO CUSTOMERS
IN € 000

	Remaining term < one year	Remaining term > one year	Total
Other liabilities to customers as of 31 Dec. 19	**1,742,936**	**2,128,452**	**3,871,388**
Registered bonds	39,304	1,278,993	1,318,297
of which institutional investors	39,261	1,266,993	1,306,254
Promissory note loans on the liabilities side	624,521	807,959	1,432,480
of which institutional investors	244,130	605,459	849,589
Other	1,079,111	41,500	1,120,611
of which institutional investors	730,506	41,500	772,006

Subscribed capital grew by €39.9 million, to €1,072.5 million. Together with the issue of the Additional Tier 1 bond in the amount of CHF 125 million, regulatory equity capital totalled €1,573.2 million (previous year: €1,442.0 million).

Common Equity Tier 1 capital rose from €1,369.7 million in the previous year to €1,406.8 million. At 31 December 2019, the Common Equity Tier 1 capital ratio was 19.8 percent (previous year: 21.7 percent), the Tier 1 capital ratio was 21.4 percent (previous year: 21.7 percent) and the total capital ratio was 22.1 percent (previous year: 22.9 percent). The leverage ratio at 31 December 2019 was 3.6 percent (previous year: 3.4 percent).

Development of earnings

Net interest income[1] increased by €19.7 million, or 7.0 percent, to €299.8 million, in line with our forecast. The increase was driven mainly by the successful new business in the year under review and previous years.

Commission paid totalled €110.7 million, corresponding to an increase of €28.8 million or 35 percent year-on-year, and are the result of the extremely successful new business. Commission received rose to €15.4 million, resulting in net commission income[2] of minus €95.3 million, compared with minus €72.5 million in the previous year.

This resulted in net interest and net commission income[3] of €204.5 million, which corresponds to a decline of €3.1 million, or 1.5 percent.

General administrative expenses rose by €16.7 million, to €125.2 million. This included an increase to personnel expenses of €6.4 million, or 12.8 percent. In addition to increases under collective agreements, this was primarily due to necessary expansion of the workforce.

[1] Net interest income is calculated by adding Item 1 'Interest income' plus Item 3 'Current income' plus Item 4 'Income from profit-pooling, profit transfer and partial profit transfer agreements' agreements minus Item 2 'Interest expenses' as shown in the income statement.
[2] Net commission income is calculated by offsetting Item 5 'Commission received' and Item 6 'Commission paid' as shown in the income statement
[3] The net interest and commission result is the sum of net interest income and net commission income.

Other administrative expenses went up by €10.3 million, or 17.6 percent. In 2019 the Bank once again focused its investment on measures to optimise processes. There was another increase in regulatory costs.

Depreciation and write-downs of intangible and tangible assets rose by €1.0 million year-on-year, to €6.2 million.

Total administrative expenses[4] amounted to €131.3 million, compared with €113.6 million in the previous year. The cost-income ratio[5] was 64.2 percent.

The net sum of other operating expenses and income amounted to minus €4.3 million.

The operating result before risk provisions[6] decreased by 22.1 percent year-on-year, to €68.9 million.

The item 'Write-downs on and adjustments to claims and certain securities, and additions to provisions for possible loan losses', amounted to €4.6 million following the allocation to contingency reserves in accordance with Section 340f of the German Commercial Code (HGB). The credit risk situation remained unremarkable. The net result of changes in risk provisioning for loan losses in the lending business (including direct write-downs) amounted to €18.2 million (previous year: minus €1.2 million). This change is due in particular to the repayment in full of a loan that was previously in default. The income from the reversal of the specific loan loss provision created for this loan was used to sustainably strengthen reserves in accordance with Section 340f HGB.

Net income from the sale of promissory note loans and the redemption of registered securities and debt securities amounted to €4.2 million.

The item 'Income from reversals of write-downs on participating interests, shares in affiliated companies and securities treated as fixed assets' amounted to €0.1 million.

The result from ordinary business activities amounted to €73.6 million. After tax expenses of €37.9 million, the net income for the financial year amounted to €35.7 million, which is 27 percent lower year-on-year.

[4] Total administrative expenses are the sum total of Item 8 'General administrative expenses and Item 9 'Depreciation and write-downs of intangible and tangible assets' as shown in the income statement.
[5] Ratio of total administrative expenses to net interest and net commission income.
[6] Net result of items 1 to 10 in the income statement.

RATINGS, SUSTAINABILITY AND REGULATORY CONDITIONS

- **MünchenerHyp Pfandbriefe retain best Aaa rating**
- **Demand for sustainability loans in residential property financing increases**
- **Leverage ratio of 3.6%**
- **Regulatory minimum ratio for MünchenerHyp's Common Equity Tier 1 capital unchanged at 8.5%**

Ratings

In October 2019, rating agency Moody's changed Germany's Macro Profile from "Very Strong (-)" to "Strong (+)" in its model. This led to it taking rating actions on nine German banks, including MünchenerHyp: the deposit rating, the senior unsecured and the issuer rating remained unchanged at Aa3, but the outlook was changed to negative.

Moody's remains positive about the fact that MünchenerHyp has a strong reputation on the capital market as an issuer of Pfandbriefe, noting that it has an accordingly high level of refinancing strength, and also acknowledges the firm ties and corresponding support the Bank enjoys within the Cooperative Financial Network.

CURRENT RATINGS AT A GLANCE

	Rating
Public Pfandbriefe	Aaa
Mortgage Pfandbriefe	Aaa
Junior Senior Unsecured	A2
Senior Unsecured	Aa3*
Short-term liabilities	Prime-1
Long-term deposits	Aa3*

* Outlook: negative

To achieve the highest Aaa rating for Pfandbriefe, Moody's still requires compliance only with the legal requirement of 2 percent over-collateralisation. There is therefore no requirement for voluntary over-collateralisation.

Our long-term unsecured liabilities are rated AA- by the two other major rating agencies, Standard & Poor's and Fitch, via the combined rating of the Genossenschaftliche Finanz-Gruppe (Cooperative Financial Network).

Sustainability

In the year under review, we continuously expanded our commitment to sustainability and consistently pursued our strategic objective to establish sustainability firmly in the Bank's core business. Through our own sustainability loans for private customers (MünchenerHyp Green Loan and MünchenerHyp Family Loan), which emphasise environmental and social issues, we aim to create sustainable added value for our customers. In 2019, sustainable loans accounted for 20 percent of our new private customer business, which means that one in five new loans issued to private customers is now a sustainable loan.

We also further developed the sustainable refinancing of our property financing business. In 2019, our Green Bond Framework was expanded to include additional sustainable refinancing products, for example sustainable senior bonds and green commercial paper, and was again awarded a positive rating in a Second Party Opinion prepared by ISS ESG. The publication of an impact report on our green loan portfolio revealed, for the first time, the potential CO_2 emissions saved or prevented by our sustainable products.

Our commitment to sustainability continues to be rated 'positive' in the sustainability rating. We still hold the current highest grade of B- in the category "Financials/Mortgage & Public Sector Finance" at ISS ESG. Specifically, ISS ESG rates MünchenerHyp's environmental commitment at B- and its social commitment at B. MünchenerHyp therefore again ranks among the three top-rated banks in its peer group and retains its "Prime Status".

At the beginning of 2020, the agency imug raised MünchenerHyp's rating slightly within the rating category, although this did not result in a higher rating classification. The Bank's sustainability rating thus remains "positive"; Mortgage Pfandbriefe also have a "positive" rating, and Public Pfandbriefe have a rating of "very positive".

The Sustainalytics rating remained unchanged.

Development of sustainability ratings over the last two years at a glance:

THE DEVELOPMENT OF THE SUSTAINABILITY RATINGS SINCE 2018

		2018	2019/2020
ISS-ESG (previously ISS-oekom)		B–(Prime status)	B–(Prime status)
imug	Unsecured bonds:	positive (BB)	positive (BB)
	Mortgage Pfandbriefe:	positive (BBB)	positive (BBB)
	Public Pfandbriefe:	very positive (A)	very positive (A)
Sustainalytics		65 out of 100 points	65 out of 100 points

Separate non-financial report

We have been disclosing the responsibility we assume for our activity in various sustainability publications for many years. The statutory reporting obligation in accordance with the German CSR Directive Implementation Act (CSR-Richtlinie-Umsetzungsgesetz – CSR-RUG) is met with the publication of a non-financial report. The non-financial statement is published separately at the same time as the annual report on the Bank's website and in the electronic Federal Gazette (Bundesanzeiger).

Regulatory conditions

Basel III
MünchenerHyp calculates its capital requirements largely using the internal ratings based approach (IRBA). The ECB's Targeted Review of Internal Models (TRIM) confirmed the correct application of these models in compliance with the rules and that the systems are suitable.

The Liquidity Coverage Ratio (LCR) was maintained without issue throughout the year, with values significantly above 100 percent, and above 300 percent on average. The Net Stable Funding Ratio (NSFR) was also consistently above 100 percent.

Basel III also introduced a leverage ratio, which must be met. At the end of financial year 2019, MünchenerHyp reached a leverage ratio of 3.6 percent.

The "finalisation" of Basel III also includes a gradual introduction of an output floor of 72.5 percent to limit the effects of internal approaches compared with standard approaches. This means that banks with low risk weightings for their receivables, such as MünchenerHyp, will be adversely affected by the changes. The introduction of this floor will also impact on MünchenerHyp's capital ratios. Overall, we take a critical view of this new regulation, because it will make lending more expensive. These regulations have not yet been transposed into European law. Banking associations in Germany and other member states are committed to ensuring adequate implementation. The Bank is monitoring developments and, given the currently high Common Equity Tier 1 ratio of 19.8 percent, assumes that this regulatory change will be manageable.

We are closely following discussions about the publication of new national and international regulations by a central body, which will forward the new regulations to the relevant departments within the Bank, so that the departments can then implement these regulations within the scope of various measures and projects. The abundance of additional supervisory and regulatory requirements causes significant costs and poses a considerable challenge for our Bank's human and financial resources.

Single Supervisory Mechanism for EU banks
In 2019 the ECB once again conducted the annual Supervisory Review and Evaluation Process (SREP), comprising a detailed evaluation of the business model, internal governance and capital and liquidity adequacy. Any additional capital and liquidity requirements will be derived from that process. As part of the SREP, a mandatory minimum ratio in 2020 of 8.5 percent (previous year: 8.5 percent) was set for Common Equity Tier 1 capital for MünchenerHyp; no additional requirements were set for liquidity.

Minimum requirements for risk management (MaRisk)
German minimum requirements for risk management under MaRisk (Mindestanforderungen an das Risikomanagement) remained unchanged in the year under review.

Recovery and resolution plan
The recovery plan was updated and the information required for the resolution plan was sent to the resolution authority. There were no significant changes compared with the previous year.

IBOR reform
IBOR interest reference rates came under heavy criticism in the wake of the manipulation scandals a few years ago; at the same time, the abolition of the submission obligation for panel banks made it necessary to replace the LIBOR rates. Alternative risk-free rates (RFRs) are currently being developed and established; existing IBOR reference rates are to be replaced based on the new RFR benchmarks.

MünchenerHyp is affected both by the announced changes in relation to the interest rate benchmarks and by the Benchmarks Regulation. However, due to the highly specialised business model, there is much less of a need for change than for most other banks directly supervised by the ECB. The necessary adjustments are currently being prepared as part of a project and will be successively phased in by the end of 2021, as soon as final decisions have been taken by the supervisory bodies.

REGISTERED OFFICE, EXECUTIVE BODIES, COMMITTEES AND EMPLOYEES

Registered office

Münchener Hypothekenbank eG has its registered office in Munich. The Bank also has a branch in Berlin and 10 regional offices.

Executive bodies and committees

The following changes to MünchenerHyp's Supervisory Board and Board of Management took place in the year under review:

The Delegates Meeting elected HRH Anna, Duchess in Bavaria, entrepreneur, and Wolfgang Höbel, Spokesman of the Management Board of Volksbank Raiffeisenbank Dachau eG, as new members of MünchenerHyp's Supervisory Board.

At the end of the Delegates Meeting, the previous Chairman of the Supervisory Board, Wolfhard Binder, former Chairman of the Management Board of Raiffeisen-Volksbank Ebersberg eG, resigned from the Supervisory Board, after stepping down from his position on the Management Board at the end of 2018 due to his age. Dr Peter Ramsauer also retired from the Supervisory Board on a regular basis at the end of the Delegates Meeting for age reasons. The Supervisory Board thanked both men for their extraordinary dedication and commendable work for MünchenerHyp.

At its constituent meeting following the Delegates Meeting, the Supervisory Board elected its previous Deputy Chairman, Dr Hermann Starnecker, Spokesman of the Management Board of VR Bank Augsburg-Ostallgäu eG, as Chairman of the Supervisory Board of MünchenerHyp, and Gregor Scheller, Chairman of the Management Board of VR Bank Bamberg-Forchheim eG, as his Deputy.

At his own request, Michael Jung stepped down from the Board of Management of MünchenerHyp at the end of 2019 for health reasons. He had been a member of the Bank's Board of Management since 2011. Both the Supervisory Board and the Board of Management accept his decision with regret and would like to thank Michael Jung for his outstanding work for MünchenerHyp and wish him all the very best for his future.

Employees

The Bank continued to expand its workforce in the year under review. A total of 96 new employees were recruited to fill vacancies. A key focus of human resources work in the past year was therefore once again on the recruitment and integration of new employees. The number of new hires was also driven by 58 employees leaving the Bank. With an employee turnover rate of 6.8 percent – excluding retirements – the Bank remains slightly below the industry average.

Other focal points of human resources work were in the area of further training and professional development, as well as occupational health management provision.

The Bank employed 573 employees[7] (previous year: 550) and 15 apprenticed trainees (previous year: 12) on average over the year. The average length of service decreased from 10.9 to 10.4 years, due to the large number of new hires over the past two years.

Corporate governance statement in accordance with Section 289f HGB

In 2016, the Supervisory Board of MünchenerHyp stipulated a quota for the number of women on the Supervisory Board and Board of Management and for the two levels of management below the Board of Management. The target quota for the Supervisory Board and the two management levels below the Board of Management is 20 percent, and 33 percent for the Board of Management. In the year under review, the proportion of women on the first management level below the Board of Management was 17 percent, and on the second management level it was 14 percent; on the Supervisory Board, it was 17 percent and on the Board of Management, 0 percent. In 2017, the Nomination Committee of MünchenerHyp's Supervisory Board recommended that these target quotas should be achieved by the end of October 2021. Notwithstanding this, MünchenerHyp considers itself to be a modern company from a social, cultural and economic standpoint, where promoting the under-represented gender is a natural part of the management culture it practises.

[7] Number of employees in accordance with Section 267 (5) HGB; excludes apprenticed trainees, employees on parental leave, in early retirement or in partial retirement (non-working phase) and employees on leave of absence.

Risk, outlook and opportunities report

RISK REPORT

Continuous risk control and monitoring is essential to managing business development at MünchenerHyp. Risk management is therefore a high priority in terms of the overall management of the Bank.

The framework governing business activities is laid down in the business and risk strategy. The MünchenerHyp Board of Management as a whole is responsible for this strategy, which is reviewed regularly to ensure its objectives are being met, revised where necessary and submitted to the Supervisory Board for information purposes at least once a year.

The Supervisory Board's Risk Committee is informed of the Bank's risk profile at least once a quarter and additionally as necessary, so that it can exercise its supervisory function. This information is based on, among other things, reports on risk-bearing capacity and credit risks, operational risk reports and the risk report prepared in accordance with the German minimum requirements for risk management (MaRisk). The committee also receives numerous detailed reports from internal management, regarding funding and liquidity, for example.

Risk management is based firstly on the analysis and presentation of existing risks, and secondly on comparing these risks with the available risk coverage potential (risk-bearing capacity). There are also various other relevant analyses that need to be viewed as a whole to enable adequate management of the Bank. Extensive control procedures involving internal, process-dependent monitoring are implemented for this purpose. The Internal Audit department, which is independent of all processes, has an additional supervisory role in this respect.

When analysing and presenting the existing risks, a distinction is made between counterparty risks, market price risks, credit spread risks, liquidity risks, investment risks, model risks and operational risks. Additional risks, such as placement risk, reputational risk, business risk, etc. are each seen as elements of the above risks and are taken into account at the appropriate point in the respective calculations.

Counterparty risk

Counterparty risk (credit risk) is of major importance for MünchenerHyp. Counterparty risk is the risk that a counterparty will fail to meet its payment obligations towards the Bank, by paying late or by defaulting completely or in part.

The Credit Manual sets forth the credit approval procedures and process regulations for those units involved in the lending business and the permissible credit products. The business and risk strategy also contains more detailed explanations on the sub-strategies for target customers and target markets, as well as specifications for measuring and managing credit risks at individual transaction and portfolio level. Individual limits have been set for all types of lending, e.g. depending on the rating. Another factor is regional diversification, which is ensured by country limits.

In our mortgage business, we ensure that we grant senior loans predominantly with moderate loan-to-value ratios. The current loan-to-value ratios break down as follows:

TOTAL PORTFOLIO OF MORTGAGE AND OTHER LOANS
INCLUDING OPEN COMMITMENTS IN €

Mortgage lending value ratio	31 Dec. 19	% of total	31 Dec. 18	% of total
Up to 60 %	**15,344,320,091.37**	40.2%	14,720,901,589.27	42.8%
60.01% to 70%	**6,786,576,426.70**	17.8%	6,820,895,373.58	19.8%
70.01% to 80%	**7,316,381,368.42**	19.2%	6,960,099,522.16	20.2%
80.01% to 90%	**3,041,601,499.12**	8.0%	2,676,516,392.51	7.8%
90.01% to 100%	**2,516,947,130.12**	6.6%	1,795,904,046.61	5.2%
Over 100%	**3,077,883,878.42**	8.1%	1,412,897,435.12	4.1%
Without	**41,166,896.66**	0.1%	2,908,425.35	0.0%
Total	**38,124,877,290.81**	**100.0%**	**34,390,122,784.60**	**100.0%**

The regional breakdown within Germany is as follows:

TOTAL PORTFOLIO OF MORTGAGE AND OTHER LOANS IN GERMANY
INCLUDING OPEN COMMITMENTS IN €

Region	31 Dec. 19	% of total	31 Dec. 18	% of total
Baden-Wuerttemberg	3,199,417,955.96	8.4%	3,010,586,219.34	8.8%
Bavaria	6,914,757,962.13	18.1%	6,318,757,224.94	18.4%
Berlin	2,026,546,575.41	5.3%	1,671,039,470.92	4.9%
Brandenburg	608,610,025.74	1.6%	568,281,726.53	1.7%
Bremen	105,422,601.78	0.3%	99,892,194.27	0.3%
Hamburg	1,096,427,567.45	2.9%	954,465,248.40	2.8%
Hesse	2,589,198,469.12	6.8%	2,057,864,034.04	6.0%
Mecklenburg-Lower Pomerania	449,022,966.46	1.2%	408,844,173.55	1.2%
Lower Saxony	2,626,151,276.25	6.9%	2,304,961,954.58	6.7%
North Rhine-Westphalia	5,056,691,558.58	13.3%	4,872,993,885.28	14.2%
Rhineland-Palatinate	1,568,178,520.40	4.1%	1,394,665,008.86	4.1%
Saarland	391,827,023.46	1.0%	331,578,228.58	1.0%
Saxony	993,549,792.56	2.6%	925,694,734.24	2.7%
Saxony-Anhalt	562,668,859.46	1.5%	529,484,804.74	1.5%
Schleswig-Holstein	1,841,943,276.68	4.8%	1,786,195,963.33	5.2%
Thuringia	324,158,194.28	0.9%	312,876,008.63	0.9%
Total domestic	**30,354,572,625.72**	**79.6%**	**27,548,180,880.23**	**80.1%**

The international breakdown is as follows:

TOTAL PORTFOLIO OF MORTGAGE AND OTHER LOANS INTERNATIONAL
INCLUDING OPEN COMMITMENTS IN €

Country	31 Dec. 19	% of total	31 Dec. 18	% of total
Austria	169,854,589.87	0.4%	136,406,356.80	0.4%
France	550,861,295.11	1.4%	428,521,831.12	1.2%
United Kingdom	543,299,669.17	1.4%	506,310,386.23	1.5%
Spain	462,348,572.71	1.2%	305,926,931.31	0.9%
Luxembourg	64,900,000.00	0.2%	64,994,688.44	0.2%
Switzerland	4,761,198,571.64	12.5%	4,444,846,106.56	12.9%
The Netherlands	538,996,737.36	1.4%	421,798,450.39	1.2%
Belgium	38,141,763.09	0.1%	43,445,424.60	0.1%
USA	640,703,466.14	1.7%	489,691,728.92	1.4%
Total foreign	**7,770,304,665.09**	**20.4 %**	**6,841,941,904.37**	**19.9 %**
Total domestic and foreign	**38,124,877,290.81**	**100.0 %**	**34,390,122,784.60**	**100.0 %**

Credit risk management starts when the target business is selected with the drafting of loan terms and conditions. Regularly reviewed risk cost functions are used for this purpose. Depending on the type and risk level of the transaction, various rating and scoring procedures are used.

In property financing, a broadly diversified portfolio of mainly residential property finance and credit approval processes that have been tried and tested for years are reflected in a portfolio with a low credit risk. Our lending business with public-sector borrowers and banks is primarily focused on central and regional governments, public local authorities and Western European banks (covered bonds only). The regional focus is on Germany and Western Europe respectively. However, highly liquid sovereign bonds and other highly-rated securities will continue to be needed to a certain extent in order to guarantee compliance with CRR liquidity requirements.

Mortgage loans are checked for the need for a specific loan loss provision based on their rating, any payment arrears or other negative factors. Workout Management carries out more extensive specific loan loss provision monitoring, especially in non-retail business.

The Bank sets up a general loan loss provision as a precaution to cover latent credit risks. This general loan loss provision is calculated based on the letter from the German Federal Ministry of Finance dated 10 January 1994.

As the property market is highly stable, specific loan loss provisions for both in our residential property financing business and commercial property financing business are only established at a very low level. This is also reflected in an NPL ratio of 0.48 percent as of 31 December 2019.

Business relations with financial institutions are predominantly based on master agreements that allow the netting of receivables from and liabilities to the other institution. As a rule, collateral agreements are also concluded. Derivatives are settled via a central counterparty (CCP).

Specific and general loan loss provisions changed as follows in the year under review:

TOTAL LENDING BUSINESS
IN € MILLION

	Opening balance	Additions	Reversals	Utilisation	Exchange rate-related and other changes	Closing balance
Specific provisions	40.6	13.2	-32.0	-1.7	0.4	20.5
General provisions	13.0	0.0	0.0	0.0	0.0	13.0

Market price risks

Market price risks include the risks to the value of positions due to changes in market parameters, including interest rates, volatility and exchange rates. They are quantified as a potential present value loss using a present value model. This distinguishes between interest rate, option and currency risks.

In the case of the interest rate risk, a distinction is made between general and specific interest rate risks. General interest rate risk is the risk that the market value of investments or liabilities that depend on the general level of interest rates will be adversely affected if interest rates change.

Specific interest rate risk, also known as the credit spread risk, is also included under market price risk. The credit spread is defined as the difference in yield between a risk-free and a risky bond. Spread risks take account of the risk that the spread may change even without any change to the rating. The reasons for a change to yield spreads may include:

- varying opinions among market participants regarding positions;
- an actual change in the creditworthiness of the issuer not already reflected in its rating;
- macroeconomic aspects that influence creditworthiness categories.

The risks inherent in options include, among others: volatility risk (vega: the risk that the value of a derivative instrument will change due to increasing or decreasing volatility), time risk (theta: the risk that the value of a derivative instrument will change over time), rho risk (the risk of change to the value of the option if the risk-free interest rate changes) and gamma risk (the risk of a change to the option delta if the price of the underlying asset changes; the option delta describes the change in value of the option due to a change in price of the underlying asset). As options in capital market business are not contracted for the purposes of speculation, risk exposure is moderate. Almost all option positions arise implicitly as a result of borrower's option rights e.g. statutory termination rights under Section 489 of the German Civil Code (Bürgerliches Gesetzbuch – BGB) and are hedged where necessary. These risks are closely monitored in the daily risk report and are limited.

Currency risk is the risk that the market value of investments or liabilities that depend on exchange rates will be adversely affected due to changes in exchange rates. Foreign currency transactions of MünchenerHyp are hedged to the maximum possible extent against currency risks; only the margins included in interest payments are not hedged.

Stock risk is low for MünchenerHyp; it results from investments in companies in the Cooperative Financial Network. In addition, the Bank has invested in a mixed fund (as a special fund of Union Investment), in which a mix of shares is also possible. Responsibility for calculating risk ratios is transferred to the investment fund company; the results are reviewed for plausibility and then transferred to the Bank's systems.

In order to manage market price risks, the present value of all MünchenerHyp transactions is determined on a daily basis. All transactions are valued using the 'Summit' IT programme. Interest rate risk is managed based on the BPV vector (Base Point Value), which is calculated daily from the change in present value per maturity band that would occur if the mid-swap curve changed by one basis point. Sensitivities to exchange rates and in relation to rotations in the interest rate curve and changes to the base spread and volatilities are also determined.

Market risks are recorded and limited at MünchenerHyp using the value at risk (VaR) indicator. The VaR calculation takes account of both linear and non-linear risks by means of a historic simulation. The impact of extreme movements in risk factors is also measured here and for other types of risks using various stress scenarios.

The daily stress scenarios (others are tested with less frequency) are:

- Supervisory requirements: the yield curve is shifted up and down in parallel by 200 basis points for each currency separately. The poorer of the two results is taken into account.
- Parallel shifting: the current yield curve is shifted up and down completely by 50 basis points across all currencies at the same time. The poorer of the two results is taken into account.
- Sensitivities:
  - Exchange rates: all foreign currencies change by 10 percent.
  - Volatilities: all volatilities increase by 1 percent.
- Steepening / flattening: the yield curve is rotated in both directions in accordance with guideline BCBS 368.
- Historic simulation:
  - Terrorist attack in New York on 11 September 2001: changes in market prices between 10 September 2001 and 24 September 2001, i.e. the direct market reaction to the attack, are applied to the current level.
  - 2008 financial market crisis: changes in interest rates between 12 September 2008 (last banking day before the collapse of investment bank Lehman Brothers) and 10 October 2008 are applied to the current level.
  - Brexit: change in interest rates and exchange rates due to the Brexit referendum on 23 and 24 June 2016.

During 2019 the maximum VaR of the bank book (interest, currencies and volatilities) at a confidence level of 99 percent with a ten-day holding period was €62 million. The average figure was approximately €28 million.

Although MünchenerHyp is a trading book institution (for futures only), it has not concluded any trading transactions since 2011.

In order to manage credit spread risks, the present value of asset-side capital market transactions of MünchenerHyp is calculated and the credit spread risks determined on a daily basis. The credit spread VaR, credit spread sensitivities and various credit spread stress scenarios are calculated in the Summit valuation system.

Credit spread risks are recorded and limited at MünchenerHyp using the VaR figure. The VaR is calculated based on an historic simulation.

The current (daily) credit spread stress scenarios are:

- Parallel shifting: all credit spreads are shifted up and down by 100 basis points. The poorer of the two results is taken into account.
- Historic simulation of the collapse of the investment bank Lehman Brothers: the scenario assumes an immediate change in spreads based on the change that was measured in the period from one banking day before the collapse of Lehman Brothers to four weeks after this date.
- Flight to government bonds: this scenario simulates a highly visible risk aversion seen on the markets in the past. The spreads of risky security classes widen, while the spreads of safe sovereign bonds tighten.
- Euro crisis: this scenario replicates the change in spreads during the euro crisis between 1 October 2010 and 8 November 2011. During that period, in particular the spreads of poorly rated sovereign bonds increased sharply.

The credit spread VaR for the entire portfolio using a 99.9 percent confidence level and a holding period of one year stood at a maximum of €86 million in 2019, while the average figure was about €78 million.

Liquidity risk

Liquidity risk includes the following risks:

- Inability to honour payment obligations on time (liquidity risk in the narrower sense).
- Inability to procure sufficient liquidity when needed at anticipated conditions (refinancing risk).
- Inability to close out, extend or settle transactions without incurring a loss due to insufficient market depth or market disruptions (market liquidity risk).

MünchenerHyp distinguishes between short-term solvency measures and medium-term structural liquidity planning.

Short-term solvency measures

The purpose of short-term solvency measures is to ensure that the Bank is able on a daily basis to honour payment obligations in due form, in time and in full, even during stress situations (willingness to pay). Current supervisory requirements (MaRisk and CRD IV) regarding banks' liquidity reserves have been implemented.

MünchenerHyp classes itself as a capital market-oriented institution within the meaning of MaRisk and therefore also fulfils the requirements of BTR 3.2.

MaRisk distinguishes between five different scenarios, which have been implemented accordingly:
1) Base case: corresponds to normal management of the Bank.
2) Bank stress: the reputation of the institution deteriorates, for example due to large on-balance-sheet losses.
3) Market stress: short-term event affecting one part of the financial market. Examples of this include the terrorist attack on 11 September 2001 or the financial market/sovereign debt crisis.
4) Combined stress: simultaneous occurrence of bank and market stress.
5) Combined stress without countermeasures: it is assumed that it is no longer possible to obtain any liquidity at all.

According to MaRisk, the Bank must meet the liquidity requirements arising from scenarios 1 to 4 for a minimum of 30 days. Scenario 5 is the worst-case scenario for internal management purposes.

Depending on the scenario, various modelling assumptions have been deduced for all important cash flows, such as drawdowns of liquidity lines, drawdowns of loan commitments already made or changes to collateral. In addition, all securities were allocated to various liquidity classes in order to deduce the volume in each scenario that could be sold or placed in a securities repurchase agreement, and in what time frame, in order to generate additional liquidity. In all cases statutory restrictions, such as the 180-day rule in the Pfandbriefgesetz, were met at all times. The result is a day-by-day presentation of available liquidity over a three-year horizon in three currencies (euros, US dollars and Swiss francs). Positions in other currencies are negligible. Limits are set in the stress scenarios across various horizons as early warning indicators for each scenario.

In addition, the liquidity coverage ratio (LCR) and a forecast in accordance with CRD IV are calculated across all currencies at least once a week.

Medium-term structural liquidity planning
The purpose of structural liquidity planning is to ensure medium-term liquidity. The legal basis for this is both MaRisk BTR 3 and CRD IV on the net stable funding ratio (NSFR).

Medium-term liquidity management in accordance with MaRisk is based on short-term liquidity management in accordance with MaRisk, i.e. both use the same scenario definitions and modelling assumptions. Due to the longer observation period, however, additional modelling is taken into account that is not decisive for short-term liquidity management, such as new business planning or current expenses such as salaries and taxes.

Medium-term liquidity planning has the following key liquidity figures over time as profit or loss components:
- cumulative overall cash flow requirement;
- available uncovered and covered funding potential, including planned new business and extensions in accordance with Moody's over-collateralisation requirements;
- other detailed data for planning and management activities.

Liquidity risks are limited via the structural liquidity forecast and stress scenarios, based on available liquidity within a year.

In addition, the NSFR is computed monthly across all currencies in accordance with CRD IV. Forecasts are also created for monitoring purposes. However, as the supervisory authorities have not yet stipulated a binding minimum value for compliance with the NSFR and the values are stable at over 100 percent, active management of this key ratio is not yet necessary.

In order to reduce refinancing risks, MunchenerHyp strives to refinance loans with matching maturities where possible. The Bank continuously checks if its relevant refinancing sources (primarily, those within the Cooperative Financial Network) are still available. In order to limit market liquidity risk, in its business with the public sector and banks the Bank predominantly acquires ECB-eligible securities that can be used as collateral for ECB open market operations at any time.

In order to diversify its refinancing sources, the Bank has started to build up its deposit business. At the end of 2019, the portfolio volume was €258 million.

MünchenerHyp does not have any illiquid bonds, such as mortgage-backed securities (MBS) or similar securities, in its portfolio.

Investment risk

This describes the risk of potential losses if the price of investments falls below their carrying amount. This applies to long-term participations held by MünchenerHyp for strategic reasons in companies of the Cooperative Financial Network and, to a small extent, positions within its special mixed fund.

Operational risks

Operational risks are the risk of potential losses caused by human error, process or project management weaknesses, technical failures or negative external factors. Human error includes unlawful action, inappropriate selling practices, unauthorised actions and transactional errors and information and communications risks.

We minimise our operational risks by qualifying our employees, transparent processes, automation of standard workflows, written work instructions, comprehensive IT system function tests, appropriate contingency plans and preventive measures. Insurable risks are covered by insurance to the normal extent required by banks.

The materiality of all services outsourced by MünchenerHyp in connection with banking transactions and financial services or other standard banking services has been examined in a risk analysis. All outsourced services are monitored in accordance with ECB guidelines and included in the risk management process.

Risk-bearing capacity

The technical concepts and models used to calculate risk-bearing capacity are continually updated in accordance with supervisory requirements. MünchenerHyp calculates its risk-bearing capacity in accordance with the requirements of the ECB, based on both the normative and the economic approach.

Market risks, counterparty risks, operational risks, spread and migration risks, investment risks, property risks and model risks, which include other risks not specifically listed, are deducted. Risks are allocated to risk-coverage potential conservatively, disregarding any diversification effects between different types of risks.

The Bank maintained its risk-bearing capacity at all times throughout the year under review.

Use of financial instruments for hedging purposes

We engage in hedging activities – interest rate and currency derivatives – in order to further reduce our risks and to hedge our business activities. We do not use credit derivatives. Asset swaps are used as micro-hedges at the level of individual transactions. Structured underlying transactions, such as callable securities, are hedged accordingly with structured swaps. Exchange rate risks for commitments in foreign currency are hedged primarily by endeavouring to secure funding in matching currencies; any remaining transactions are hedged using (interest rate) cross-currency swaps.
At portfolio level, we prefer to use interest rate swaps and swaptions as hedging instruments. Bermuda options on interest rate swaps (swaptions) are used in addition to linear instruments to hedge embedded statutory termination rights or interest rate cap agreements.

Accounting-related internal control and risk management processes

The accounting-related internal control system is documented in organisational guidelines, process descriptions, accounting manuals and operating instructions. It comprises organisational security measures and ongoing automatic measures and controls that are integrated into work processes. The main controls are segregation of functions, the dual control principle, access restrictions, payment guidelines, the new product and new structure processes and balance confirmations. Non-process-specific audits are conducted primarily by Internal Audit.

The risk management methods described in the risk report provide ongoing qualitative and quantitative information on the financial situation of MünchenerHyp, such as performance development. Aspects of all types of risks are included in this assessment.

At MünchenerHyp there is close coordination between the risk control and financial reporting units. This process is monitored by the entire Board of Management.

The output from the risk management system is used as a basis for multi-year planning calculations, year-end projections and reconciliation procedures for the accounting figures calculated in the Bank's financial accounting process.

CORPORATE PLANNING

MünchenerHyp regularly analyses its business model based on the challenges that will face the Bank in future, and further develops its business and risk strategy on this basis. In order to achieve its strategic objectives, numerous measures have been defined across various areas of activity, which will be consistently implemented in the years ahead. The MaRisk-compliant strategic process, which also sets the parameters for the annual planning process, will play a crucial role in this. As part of this annual planning process, sales targets and centralised and decentralised components of administrative expenses are reconciled with the projected rolling multi-year income statement. All earnings and cost components and our risk-bearing capacity are monitored continually or projected on a rolling basis, so that the Bank can react promptly and appropriately to fluctuations in earnings or costs.

Planning also includes matters in relation to equity adequacy, to ensure the Bank complies with supervisory requirements.

OUTLOOK – OPPORTUNITIES AND RISKS

- **Economic outlook remains subdued**
- **Strong investor interest in commercial property still expected for 2020**
- **MünchenerHyp intends to build on its market position in private and commercial property financing**

Economic development and financial markets

The prospects for a recovery in the global economy are uncertain. Although economic researchers do expect a slight increase in global gross domestic product in 2020, they also see continued risks, particularly with regard to trade and geopolitical tensions. In this context, the IMF lowered its forecast for global economic growth slightly at the start of 2020, to 3.3 percent, and to 3.4 percent for 2021. The IMF sees the signs of recovery in production and global trade as a support for the economy.

A slight economic upturn is also forecast for the eurozone. Economic growth is expected to increase by 1.3 percent in 2020 and by 1.4 percent the year after. The reason for this is the expectation that the economy in the eurozone will benefit from growing international demand.

The economic outlook for the German economy also remains subdued. Although sentiment indicators did improve slightly at the beginning of 2020, economic researchers agree that there will only be a moderate revival of economic growth. GDP growth forecasts are therefore 0.8 percent on average. The IMF predicts growth of 1.4 percent for 2021. In 2020, the economy will benefit from the positive effect of private and public consumption, as well as investment in construction. A slight upwards trend is forecast for industrial production. The outlook for the labour market is also cautious. A slowdown is expected in job creation and wage increases. Price development is expected to remain moderate, with a projected inflation rate of 1.4 percent for 2020. Due to the strong dependence of the German economy on exports, however, there are also significant economic risks for 2020, due to continued trade and geopolitical conflicts.

In view of the only slight improvement in economic prospects, the central banks will continue to pursue an expansionary monetary policy. It remains to be seen whether the strategic review announced by the ECB will lead to a change in monetary policy. Due to differing opinions within the ECB's Governing Council regarding negative interest rates and the asset purchase programme, most experts are predicting only minor adjustments.

Slightly weaker economic growth is expected in the USA. Some experts therefore expect to see further cuts in interest rates by the Federal Reserve. The Fed Chairman recently announced a pause in the interest rate-cutting cycle and a suspension of changes in the federal funds rate for the time being. Following recent poorer than expected economic data from the UK, the Bank of England may soon lower its base rates. The Bank of Japan and the Swiss National Bank are likely to take a wait-and-see approach. Ten-year Bunds are therefore likely to continue trading with negative yields, which are expected to range between minus 0.50 percent and 0.00 percent.

The foreign exchange markets have seen only minor fluctuations recently. Potential interest rate cuts by the Fed and weaker economic data in the USA could lead to an appreciation of the euro against the US dollar. Furthermore, the euro may benefit from a gradual stabilisation of industrial production and barely-existent potential for interest rate cuts in Europe. Further developments with Brexit and the structure of the forthcoming trade agreement between the United Kingdom and the EU are likely to have the greatest effect on the performance of sterling. In the event of interest cuts by the US Federal Reserve, the Swiss franc could benefit from its status as a "safe haven" and post slight gains in 2020.

On the covered bond markets, an increase in the issue volume of benchmark bonds denominated in euros is expected in 2020, to €146 billion. Once again, Germany and France are expected to account for the largest market shares. Cited reasons for the renewed increase in the issue volume include the relaunch of the ECB's purchase programme, new issuers entering the market and the continued high demand for property loans. The purchase programme should continue to bring favourable issue spreads and continued low interest rates.

Property and property financing markets

An anticipated gradual stabilisation in the global economic situation at the start of 2020, in spite of ongoing political uncertainties, is bolstering demand for property and property financing. Experts therefore expect to see continued strong investor interest in property in 2020, particularly in large cities and economically prosperous regions. This continues to bring more opportunities than risks for markets in which MünchenerHyp is active.

In terms of the German residential property market, the trend that has persisted for the past few years is expected to continue. Prices will remain on an upward trend, however the strong momentum of recent years is expected to slow to a certain extent. In addition, trends in purchase prices and rents will continue to vary from one region to another. Migration to the top seven cities, their surrounding areas and prospering business locations will continue, further reducing supply there due to high demand. This development is not without risks of regional overvaluations. Overall, however, experts still see no immediate risk of a nationwide property bubble developing.

The huge interest of institutional investors in German residential property also continues unabated, despite lower returns. However, the political discussion on limiting rent increases is causing some uncertainty among investors, as corresponding measures such as a rent cap will influence income and valuations.

If current conditions continue – high demand for residential property and low interest rates – strong demand for property financing is also expected in 2020. With prices continuing to rise, the proportion of property purchases financed by loans will increase.

Investors will continue to focus closely on German commercial property. The weaker economy is not expected to have any effects on the market or demand. Office property will remain the most significant asset class, while interest in retail property is expected to decline. Overall, experts anticipate the volume of transactions to remain at a high level, but not to exceed the level of 2019.

In the UK, it remains to be seen how much of an effect Brexit will have on the British economy and thus the labour market and demand for space. However, it can be assumed that the impact will be limited for the time being, due to the transitional arrangements. The mood of investors therefore brightened slightly at the beginning of 2020 for the first time. Notwithstanding the above, the UK retail trade will remain under pressure, particularly in regional markets. The radical change in shopping habits is impacting bricks & mortar trade, and, unlike in other European countries, bricks & mortar food retail trade is also affected in the UK.

Conditions for investors in the French property market are overwhelmingly positive. Major infrastructure projects are bringing new sub-markets in Greater Paris to the attention of office users and investors. Due to the shortage of space in the central business district of Paris, as well as attractive prospects in the surrounding areas, letting activity and rent increases will shift to peripheral office markets.

The economic forecast for the Netherlands remains positive, which also means sustained high demand for the property market. Migration to large cities will also continue in the Netherlands, leading to excess demand in both the residential segment and for office property. Falling vacancy rates and rental growth are expected.

Significant economic growth in Spain is having a positive effect on its commercial property market. Commercial properties in the office, retail, logistics and hotel segments are achieving significant rental growth and are recording falling vacancy rates due to sustained high user demand in the major cities. Investments in commercial properties are therefore particularly attractive to investors who are willing to pay high prices for commercial property.

An upturn in economic growth to 1.5 percent is forecast for Switzerland in 2020. The labour market also looks stable. With continued low interest rates, demand for property should thus remain high. According to expert estimates, the price trend for residential property will be moderate. A further increase in vacancies is expected on the rental housing market, as housing construction exceeds demand.

Strong demand for residential properties will continue in the larger cities in Austria. This creates a gulf between town and country, because it induces people to move closer to large cities to improve their prospects on the employment market. In contrast to Switzerland, the regional markets are not characterised by oversupply; instead, supply and demand are in balance.

In the USA, after the strong transaction volume in 2019, investors are expected to be somewhat more cautious in 2020, as the economic outlook is less favourable. On the other hand, institutional investors have high liquidity and are therefore under pressure to invest. This could lead to investors relaxing their investment criteria and paying comparatively high purchase prices for properties that do not conform to the low-risk core segment. Overall, however, the outlook remains positive, particularly for the office property market.

Development of business at Münchener Hypothekenbank

Building upon the very good new business result from 2019, our aim is to further expand MünchenerHyp's market position in private and commercial property financing.

The general situation described in the section above provides us with a good foundation and opportunities for this, because we assume that demand for residential and commercial properties in these markets will remain high. Our planning is also based on the assumption that demand for property and, consequently, property financing, will be boosted by low interest rates.

Under these conditions, we are confident that we will also be able to generate a high volume of new business in 2020, in line with the high level seen in the year under review. As we have been able to increase new business dramatically in each of the last two reporting years, we have now reached a level that we aim to consolidate or only moderately expand in 2020.

Private residential property financing in Germany remains the focus of our new business planning. Our key partners in this business segment are, and shall remain, the banks in the Cooperative Financial Network. These have a strong sales force and customer proximity, which continues to open up growth opportunities for them. We assume that they will therefore also be able to expand their market share in residential property financing in 2020, as they have in previous years. We aim to strengthen our market position as an expert in long-term property financing within the Cooperative Financial Network. To this end, we are planning again sales campaigns in the retail and individual business, to step up the joint market cultivation activities with our partner banks. We see potential and earnings opportunities particularly in the further development of higher-volume individual business with the cooperative banks. We will also further digitalise our processes, to make cooperation easier, more customer-focussed and more efficient. This includes in particular payment and portfolio processes. Our objective with this is to tackle competition within the Cooperative Financial Network and strengthen our position as an association partner.

In cooperation with independent financial service providers, we see good opportunities to continue our growth trend in this business segment, due to the favourable conditions currently governing our refinancing on the capital market, in comparison with refinancing via deposits. It is also important here to simplify the cooperation with our partners and to take a customer-orientated approach.

In our cooperation with PostFinance, we are planning new business at the previous year's level. We have based our planning on the assumption that the already intense competition in Switzerland will increase again. To support our activities, we will run another sales campaign in Switzerland.

In our financing business in Austria, which we launched in 2019, we are striving for a steady but cautious growth trend in 2020 and subsequent years. We also want to cooperate with the Volksbanks and Raiffeisenbanks close to the border.

In commercial property financing we want to continue the positive development of the year under review and further strengthen this business as the Bank's second core business area. We based our planning on the assumption of a sound business environment – even though protectionist tendencies and geopolitical tensions are creating uncertainties. In our view the latter are offset by two aspects that bring more stability to general business conditions: firstly, we assume that there will be very little change to the low interest level in the short to medium term, and secondly, we expect a high inflow of capital from investors into the property asset class, due to a lack of alternative forms of investment.

In our domestic business, we plan to maintain at least the level of new business attained in 2019. Investors still regard Germany as a "safe haven"; therefore, the demand for property investments will remain high. The challenge lies principally in undiminished strong competition on the financing market from traditional financial institutions and, increasingly, from alternative finance providers, such as debt funds.

In our international business, we see opportunities for growth in 2020. Especially in our longstanding markets of France, Benelux, Spain and, to a limited extent, the UK, we plan to continue to serve our national customers in these countries and to find local investors and globally positioned investors by having a stronger local focus. In addition, we are currently examining the possibility of entering the Scandinavian market.

We anticipate a high level of transaction activity on the syndication markets in 2020, as the trend towards ever-increasing volumes of financing continues. Only a few banks are prepared to leave excessively high financing volumes entirely on the balance sheet. In 2020, we therefore expect to see a stabilisation of the trend from 2019, with a growing secondary market volume at MünchenerHyp at the same time. On the one hand, we are ready to participate to a significant extent in third-party financing and, on the other, to surrender portions of our own financing to other banks. We will also continue to use our syndication programme with the Cooperative Financial Network.

The objective of our lending business with the public sector and banks will remain unchanged and primarily serve to manage liquidity and cover pools. For 2020, we expect stable development of our portfolio volume, as maturing securities will have to be replaced to manage liquidity.

We will also further expand our sustainability activities in 2020. In particular, we want to give our sustainable financing solutions an even stronger foothold in the market and expand our sustainable issuing activities.

For 2020, we are planning a refinancing requirement of between €7.0 billion and €8.0 billion, of which €6.0 billion to €6.5 billion will probably be raised on the capital market and the remainder on the money market. Similar to the previous year, we plan to issue two to three large-scale issues, with the additional potential to top up existing bonds. Due to its partnership with PostFinance in Switzerland, MünchenerHyp will continue to have a refinancing requirement in Swiss francs.

One large bond is maturing in financial year 2020 – a Mortgage Pfandbrief to the volume of €875 million – due for repayment in October.

Following the rating agency Moody's lowering of Germany's Macro Profile in its model in autumn 2019, further effects on the deposit rating for Senior Unsecured and MünchenerHyp's issuer rating cannot be ruled out, although we aim to control such effects with countermeasures.

We are aiming to achieve a moderate increase in net interest income generated from business operations in 2020. Stable trends on our key markets will again provide opportunities to expand our new business and thus our mortgage portfolios.

This will continue to have a positive impact on the Bank's earnings. On the other hand, increasing competition, persistently high regulatory pressure and increased investment and personnel costs have counteractive effects.

Based on the available information to date, we expect at most a slight increase in risk provisioning for the lending business.

In light of the favourable market environment forecast, we are confident that we will attain our targets for the 2020 financial year and succeed in further expanding our market position. We expect net income to be in line with the previous year's level.

Disclaimer regarding forward-looking statements

This annual report contains statements concerning our expectations and forecasts for the future. These forward-looking statements, in particular those regarding MünchenerHyp's business development and earnings performance, are based on planning assumptions and estimates and are subject to risks and uncertainties. Our business is exposed to a variety of factors, most of which are beyond our control. These mainly include economic developments, the state and further development of financial and capital markets in general and our refinancing conditions in particular, as well as unexpected defaults on the part of our borrowers. Actual results and developments may therefore differ from the assumptions that have been made today. Such statements are therefore only valid at the time this report was prepared.