

The Second Swedish National Pension Fund

Annual Report
and Sustainability Report

2017



Andra AP-fonden
Second Swedish National Pension Fund - AP2

AP2

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AP2 is one of **Northern Europe's largest** pension funds and manages **SEK 345.9 billion** in virtually all asset classes and all around the world. The Fund is a **long-term and responsible** fund manager that has an important mission – to give those who have worked in Sweden the best possible future pension by reducing the risk of the so called the brake being released.

One of five buffer funds in the Swedish pension system



Unless otherwise stated, the portfolio assets referred to in this report are "allocated exposures". In addition to recognised fair values, these also refer to allocated (but not yet invested) liquidity for the specific class of asset, and the liquid funds held as collateral for positions already taken in derivative instruments. Classes of asset, derivative instruments and liquid funds are reported individually in the balance sheet at their fair values. All monetary amounts are expressed in Swedish kronor and abbreviated as SEK k (thousand), SEK million or SEK m (million) and SEK billion or SEK bn (thousand million). Figures in parentheses refer to the preceding year.

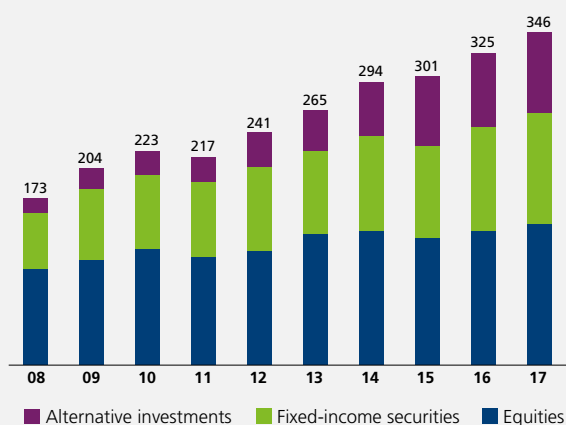
AP2's annual report covers the period January 2017 to December 2017. The previous annual report and separate sustainability and corporate governance report were published on 10 February 2017.

Andra AP-fonden is officially translated to The Second Swedish National Pension Fund. In body text, for convenience, this is shortened to AP2.

Integration of sustainability in asset management

Read more about the Fund's new multi-factor indices on page 22.

AP2's fund capital 2008–2017, SEK billion



Net result for the year SEK 28.8 billion



THE GLOBAL GOALS

For Sustainable Development

AP2 is committed to the UN's goals for sustainable development in various ways. **Read more on page 30.**

2017 in brief

The year's development means that AP2's return exceeds the Fund's long-term return assumption, which is 4.5 per cent. In the past five years, the Fund's average annual real return has amounted to 9.0 per cent and in the past ten years the return has been 5.0 per cent. 2017 was a strong year mainly for the Fund's investments in equities. For the ninth consecutive year, the net flow to the pension system was negative and the Fund has now paid out approximately SEK 44 billion in total to cover the ongoing shortfall in the pension system.

Fund capital

SEK **345.9** billion 

The Fund's assets under management totalled SEK 345.9 (324.5) billion on 31 December 2017.

Result

SEK **28.8** billion 

The Fund posted a net result for the year of SEK 28.8 (30.5) billion.

Operating expenses

0.06 % 

Operating expenses, expressed as management cost share, remained low and amounted to 0.06 (0.07) per cent.

Net outflows to the national pension system

SEK **−7.4** billion 

Net outflows to the national pension system of SEK −7.4 (−6.6) billion.

Relative return

0.1 % 

The relative return on the total portfolio, excluding alternative investments and operating expenses, amounted to 0.1 (−0.4) per cent.

Total return

9.1 % 

The Fund's return on the total portfolio was 9.1 (10.5) per cent, excluding commission fees and operating expenses. Including these costs, the portfolio generated a return of 9.0 (10.3) per cent.

Five-year overview, financial key ratios

	2017	2016	2015	2014	2013
Fund capital, flows and results, SEK million					
Fund capital	345 931	324 522	300 624	293 907	264 712
Net outflows to national pension system	-7 375	-6 637	-4 944	-5 120	-6 880
Net result for the year	28 784	30 535	11 661	34 315	30 138
Return, %					
Return on total portfolio before commission fees and operating expenses	9.1	10.5	4.1	13.3	12.8
Return on total portfolio after commission fees and operating expenses	9.0	10.3	4.0	13.1	12.7
Annualised return after commission fees and operating expenses, five years	9.8	10.6	8.0	9.4	10.8
Annualised return after commission fees and operating expenses, ten years	6.0	5.5	5.7	7.1	7.0
Risk, %					
Standard deviation ex-post, total portfolio ¹	8.9	8.7	8.7	9.1	9.3
Standard deviation ex-post, daily market valued portfolio	3.9	7.2	8.9	5.7	5.7
Sharpe ratio ex-post, daily market valued (listed) portfolio	2.5	1.4	0.3	2.2	2.1
Sharpe ratio ex-post, total portfolio	2.9	1.9	0.5	2.6	2.4
Expense ratio as % of managed capital					
Expense ratio, cost including commission fees	0.15	0.15	0.18	0.17	0.17
Expense ratio, operating expenses	0.06	0.07	0.07	0.07	0.07
FX exposure, %	33	31	30	24	23

¹ Calculated on ten-year quarterly return.

Key figures sustainability

	2017	2016
AP2's listed equity portfolio		
The equity portfolios' absolute emissions of greenhouse gases (Scope 1 and 2) (tCO ₂ e million)	2.6	2.7
Carbon dioxide intensity related to the share of the companies' market value (tCO ₂ e/SEK million)	18	20
Carbon dioxide intensity related to the share of the companies' revenue (tCO ₂ e/SEK million)	28	24
Carbon dioxide intensity, weighted average (tCO ₂ e/SEK million)	24	
The market value of the Fund's portfolio covered by CO ₂ e data (SEK billion, 31/12/2017)	142.4	135.4
Business travel		
Proportion of train journeys between Gothenburg and Stockholm, %	91	84
Carbon dioxide emissions from:		
Rail, domestic, tonnes of CO ₂ e	0	0
Air, domestic, tonnes of CO ₂ e	5	9
Air, abroad, tonnes of CO ₂ e	172	199
Internal environmental indicators		
Electricity, kWh	135 000	130 000
Renewable electricity, %	100	100
Copying paper, purchased (A4), kg	350	755
Number of printouts	159 000	228 000
Other		
Female staff, %	34	33
Proportion of women in senior positions, %	35	35
Proportion of managers who have undergone training in the working environment, %	94	N/A



Stable return with continued integration of sustainability

In many ways this has been a normal year for us at AP2, as far as this is possible in the middle of a turbulent and rapidly changing world. Our return has continued to develop positively after yet another year with good results at a low cost. We are following our long-term strategy and have worked intensively in the area of sustainability.

We present a profit for 2017 of SEK 28.8 billion. This corresponds to a return of 9.0 per cent, which exceeds our long-term target. Emerging markets have also contributed positively this year to the return and alternative investments continue to deliver at a good level. Of our alternative investments, Chinese A-shares and unlisted traditional properties in particular experienced a positive development during the year.

Our costs remain low even though in 2017 we experienced an increased cost in the supply chain, as a result, among other things, of ongoing consolidation among many of our most important suppliers. The way we deal with this is to manage more and more internally and continue to develop our activities

in a cost-effective way. This means that in the cost evaluations, we continue to be highly competitive and keep our distance to most other actors in the industry.

Long-term strategy that delivers

Through our assignment, we have a long-term perspective, and we evaluate the results during a longer time-frame. The average annual real return for the last five and ten years amounts to 9.0 and 5.0 per cent respectively. This exceeds our long-term goal and shows that over time we have the ability to create value for Sweden's pensioners, even in periods characterised by a turbulent world around us with financial crises.



“Respect and openness are important prerequisites for creating a good working environment, just as this is important for us to succeed with the assignment that we have and that we feel very proud of.”

The results show at the same time the significance of spreading the risk between different asset classes and markets throughout the world. During 2017, we increased our holdings in China, partly in equities and partly in government bonds. These asset classes require a special license, which we have had for equities since 2013, while we obtained a license for bonds during 2017.

Sustainability takes priority in internally developed indices

The government has stated that the AP Funds will be a model in the area of sustainability, and this has always been our ambition at AP2. We aim to develop our portfolio in line with the two degree target and our vision has long been to integrate sustainability in all our management. During 2018, we will carry out an overhaul in all asset classes in order to further develop and structure our sustainability work.

An important step in integrating sustainability as part of the investment decisions is that we have continued to implement ESG (Environmental, Social and governance) in the global equities asset class in our internal quantitative management, which is approximately 29 per cent of the total portfolio and amounted at year-end to SEK 99 billion. During 2017, we designed two new so-called multi-factor indices where, ESG is the most important factor for the weighting in the indices. These are scheduled to be launched in 2018. At the same time as we are integrating sustainability in the management in this way, our new indices are estimated to provide a better risk-adjusted return at lower cost. This work shows in our innovative strength.

Because we have both fundamental and quantitative internal management and external management, it is significantly more complicated to integrate sustainability in the investment decisions than for players who, for example, only have one type of management. At the same time, it is precisely the strength we have gained both as owner and asset manager that has enabled us to build up the expertise and experience that have been necessary in managing to achieve this.

Sustainability work focused on opportunities

During 2017 we have continued to work with sustainability issues in an active and structured way. Together with the other AP funds, we have conducted a stakeholder dialogue and materiality analysis to identify the stakeholders view on our prioritised sustainability issues. A general take home from the them was that the long-term return was considered to be the most important overall target. For us at AP2, this is obvious because we are convinced that sustainable investments also contribute to higher returns.

2017 has for us been characterised more by making the most of the opportunities available in the area of sustainability rather than eliminating risks as before. We have worked with relating our activities to the UN's 17 goals for sustainable development. We have carried out an initial investment in a private equity fund, with particular focus on its sustainability targets, and continued our ongoing work with increasing investments in social and green bonds. We are also continuing to act as a long-term



and responsible owner by divesting in companies with financial climate risks, but also by retaining holdings in those companies in which we see that we have an opportunity to influence developments in a positive direction.

During the year, we have also been working to encourage the portfolio companies to improve their reporting in order to make it easier to assess their sustainability work. In our internal company analyses, issues concerning sustainability play an increasingly important role. By being represented on the boards of global organisations such as PRI (Principles for Responsible Investment) and IIGCC (Institutional Investor Group on Climate Change), where the work is focused on contributing to the financial industry to make sustainable investments in the, among other things, we contribute to work involved in establishing frameworks on the market.

Large-scale and shared commitment

We have developed a culture where all employees have a strong commitment and a curiosity in the area of sustainability. This is an important explanation why we can be active and succeed in large-scale and complex projects such as integrating ESG into the quantitative management. Getting this far has been made possible by a genuine interest in these issues that has been driven from below and up through the organisation. Today, every employee in the Fund is covered by the work and sustainability issues are on the agenda in all the Board and management meetings.

Investment rules central for the return

Our strategy and portfolio will be based on our assignment, our investment rules and the chain of events that we expect in the future. The portfolio has over time become ever more diversified and globally focused, which means that the dependency of developments in individual markets such as Sweden is reduced. At the same time, this may mean that we do not have the same ability to contribute to the return in years when these markets experience a good development. Our positioning in currencies and interest rates had a negative impact on the financial results in 2017. Our view remains that the interest rates will rise and the Swedish krona will be strengthened.

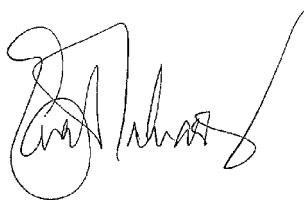
Today's low interest rate environment raises the question about the AP funds' investment rules. When the new rules will take effect has not yet been decided at the time of writing. We have begun work with the ambition by 2020 to have a new and sustainable strategic portfolio that is adapted to the proposed new rules. The content of the investment rules is critical to our ability to continue delivering a stable and high return. A lower portion of the portfolio in fixed-income investments and increased opportunities for alternative investments, a market where we are already established and are seen as an attractive partner, are two of the proposed changes that would be very important for the future development in the portfolio.

Values, culture and pride in the assignment

Something that characterised 2017 and that I remember the most from the year is #metoo and the debate surrounding it. While it is naturally very sad that so many have been affected, it is also positive that the issue has raised awareness. My feeling is that what we have seen during the autumn is a force that is not content with anything other than change – that is real and from the ground up.

AP2 is an organisation that has long been involved with issues relating to culture, values and our attitudes towards each other. Respect and openness are important prerequisites for creating a good working environment, just as this is important for us to succeed with the assignment that we have and that we feel very proud of.

Finally, I would just like to thank all employees for their committed and successful work in 2017. We will continue to do our very best every day in our important assignment in 2018 as well.



Eva Halvarsson, CEO



We have developed a culture where all employees have a strong commitment and a curiosity about the the area of sustainability.

MACRO

Central banks cut stimulus

In 2017 central banks changed tack and started to cut their unprecedented stimulative monetary policies. This took place in an environment when the global economy was stronger and more solid than for a number of years. Moreover, towards the end of the year, there were clear signs of increased activity in several countries. Together, this indicates that the global growth will continue to be strong in 2018. At the same time, a gradually tighter monetary policy is expected.

Strong global economy

The global economic trend from the latter part of 2016 continued in 2017. This meant more balanced growth, driven by both developed countries and emerging markets. It also provided, just as on similar occasions, a more solid development. In addition, the growth was more balanced between the service sector and industry and was gradually reinforced during the year. This in turn meant that most forecasters had to revise their projections upwards several times, which has not happened for a long time.

The biggest change from a growth perspective took place in emerging markets. This resulted in two of the larger countries, Brazil and Russia, leaving the recession years behind. Meanwhile, the other two heavyweights in the category, China and India, continued to grow at a decent rate. Among the developed economies, growth surprised most positively in the eurozone and Japan, but Sweden and the USA also grew more than expected.

Many labour markets running hot

An important reason why the economy continued to grow strongly is down to the ever improving labour markets in developed countries. According to certain methods of measurement, unemployment has fallen to its lowest levels in 40 years. This is especially true in the USA, Japan and the UK, while there is still room for increased employment in Europe. However, it is the European labour market that surprised the most. More people in work increases the households' disposable income. This in turn leads to higher consumer confidence, increasing consumption and thus increasing aggregated demand.

In 2017 global trade showed the highest rate of growth since just after the financial crisis. The rising demand, as described above, is one explanation of why global trade took off. Another is the recovery of the commodity demand, which in turn is very much driven by stronger growth in emerging countries.

The Swedish economy performed very strongly during the year. The Swedish National Institute of Economic Research's

barometer of the Swedish economy has since April been on a level that it denotes as "much stronger than normal". This usually only occurs during the height of a business boom. The stimulative monetary policy with low interest rates is naturally contributing to the continued positive growth of the economy.

Even the European growth was strong and surprisingly positive during the year. This was the case in large economies such as Germany, where the economy indicator from IFO on the industry, for example, recorded their highest levels ever. But it was also the case that the countries that experienced the biggest downturn in connection with the Euro crisis, such as Italy and Portugal, have now returned to growth.

The US economy developed relatively well in 2017 and despite the hurricane season being worse than normal, it did not have a significant effect on the economy as a whole. After a year as President, Donald Trump managed just before Christmas, with the support of the Republican Party, to push through a major tax reform with a focus on lower corporation tax. The tax reform is expected to raise the GDP growth by approximately 0.3 per cent in 2018 and about a tenth in 2019. At the same time, the international monetary fund, the IMF, warned that the tax reductions will tear new holes in the US state finances which will be felt as weakened growth from 2022 onwards.

Central banks change tack

The clearly stronger economic recovery has made several central banks change tack during the year. This has taken place despite the fact that the inflation, which certainly seems to have reached the bottom, has only risen slowly. In addition to the American Federal Reserve, which raised the policy rate three times in 2017, both the Canadian and British central banks raised their policy rates. The European Central Bank decreased its bond asset purchase programme in March and announced at its October meeting that it would continue to cut down from the end of the year. The asset purchases have

reduced from the current EUR 60 billion per month to EUR 30 billion and will continue until September 2018. The Swedish Central Bank ended its bond asset purchases at the end of the year, but will likely delay raising the policy rate for the first time to later in 2018. However, the monetary policy will be changed cautiously. It is clear that the central banks would like to see inflation overshoot their targets, rather than risking a premature brake in the upward economic trend.

Inflation only rising slowly

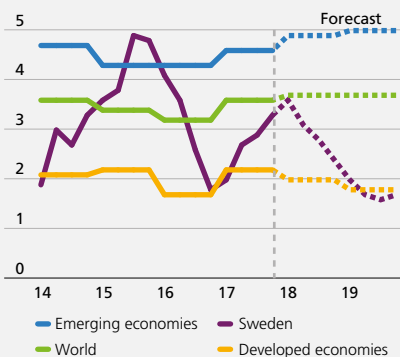
A big topic of discussion among economists in 2017 was the lack of inflation impulses, despite the fact that many economies moved closer or past what is considered to be full employment. Normally, strong labour markets usually generate pressure upwards on salaries and wages, and therefore on inflation. There are probably several reasons why this has not yet happened to the extent expected. Among other things, the low unemployment figures seem to hide a larger labour supply than what is indicated. This in turn can probably be explained by part-time work, long-term unemployment, migration and a more globalised labour market. Another explanation is that the inflation expectations have not had time to pick up since the crisis years. As a result of the continued strengthening in the labour market, the expectations have increased for higher salaries and wages in 2018.

Outlook

The recovery of the global economy will continue in 2018. It is likely that growth will pick up pace more broadly in emerging markets, with the possible exception of China, which grew more than expected in 2017, and where the economic cycle is more mature. China's leader, Xi Jinping, strengthened his power at the party's 19th party congress in the autumn, which indicates continuity in the policy. This also means that the reformation work in China will continue. Tighter monetary and financial policies, improved supervision of financial institutions, an ambition to gain better control of the credit growth, together with the government's renewed focus on environmental reforms, mean that some degree of slowing growth is expected at the start of 2018. However, it is still possible that the Chinese government will achieve its growth targets of approximately 6–6.5 per cent during 2018.

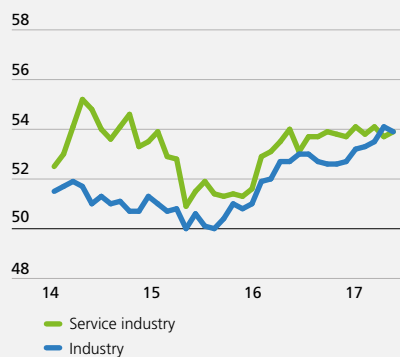
In several countries, such as Sweden, Germany and the USA, there were clear signs that the economic activity increased during the end of the year. This means that there is much to indicate that 2018 will start strongly. In addition, there is the tax package in the USA, which will create slightly higher growth. With a better balance in global growth, it is also likely to be more sustainable. Although central banks started tightening their monetary policies, the policies will continue to be stimulative in 2018, but to a lesser extent than before. Accordingly, global growth is expected to border on or become slightly stronger than in 2017.

GDP growth



Source: IMF's and the Swedish Central Bank's forecasts

Global purchasing managers index (growth over 50)



Source: JP Morgan/Markit Economics

THE SWEDISH PENSION SYSTEM

The Swedish income pension system

In the Swedish national pension system, future pensions are determined by the level of each and everyone's individual income, based on income received over an entire working life. A key element of the pension system is the automatic balancing mechanism, or 'brake'. This ensures that pensions are adjusted upward more gradually at times when liabilities exceed assets.

The Swedish pension system is financially robust, because the system, over time is not permitted to be underfinanced. If a deficit occurs, the system has a built in mechanism that restores the balance. If the economy fares well, with good growth and a high level of employment, the pensions increase in line with the average salary growth in the country. On the other hand, if it fares less well, with fewer in work, there is a risk of activating automatic balancing and the pension growth will be lower than the salary growth until the balance in the system is restored.

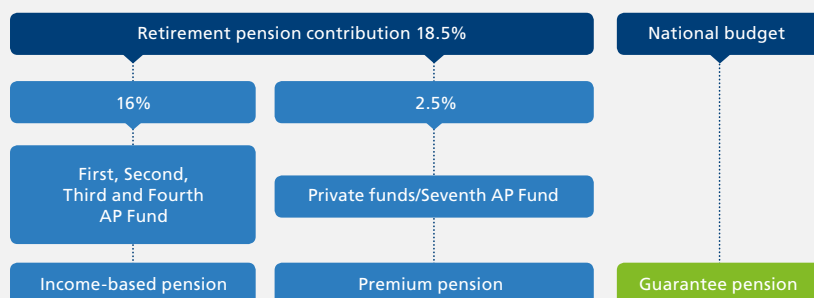
Balancing the system

The size of each income pension depends on how long you have worked and what salary you have had, and on the average salary trend. It is determined by the number of pension entitlements you have earned and by the calculation rate on these pension entitlements. In order for the pensions to be calculated with the average salary trend, the system must be in balance, which means that the assets are equal to or greater than the liabilities. Contribution assets and the AP funds' combined capital assets shall at least equal accumulated pension liability. Where liabilities are greater than assets, automatic balancing is applied. This

slows the upward adjustment of pensions. When the assets once again exceed the liabilities, there is a readjustment of the pensions to the level they would have been had the balancing not taken place. However, the automatic balancing always involves a pension shortfall, because the pensions paid out during a balancing period are lower than what they would otherwise have been. Read more on the Fund's [website](#).

The return on the AP funds' capital has contributed to avoiding the automatic balancing for several years, even though the AP funds constitute a relatively small part of the pension system. However, in 2008 the brake was applied as a result of major adjustments of pensions and pension entitlements in the preceding year, as well as the sharp downturn in the global stock markets. When this happened, pensions were affected in 2010. The brake was applied yet again in 2009, in response to the sharp downturn in the economy and a rise in unemployment in the wake of the global financial crisis. Much of this braking effect has been regained in the last few years as the financial markets have recovered and the economy began to grow again. At the end of 2017, the system left the balancing period that started at the end of 2009. More information at www.pensionsmyndigheten.se

The Swedish pension system



The national retirement pension comprises the following: an income-based pension, a premium pension and a guarantee pension. The pension is financed in the form of a levy of 18.5 per cent on total income earned. Of this amount, 16 per cent is used to finance annual disbursements (income-based pension) from the First, Second, Third and Fourth AP Funds, while 2.5 per cent is invested, to generate interest in an individual premium pension account. In addition there is a guarantee pension that is financed via the state budget.

MISSION, GOAL AND VISION

The Fund's mission, goal and vision

The mission as a buffer fund means that AP2, with its return, will contribute in the long-term to balancing the pension system, and thus a good pension trend, even in times of economic and demographic changes. This is stated clearly in the Swedish National Pension Funds Act.

The act and its preliminary work set clear principles for the AP funds' assignment. The capital must be managed so that it provides the greatest benefit for the pension system. The AP funds should also have the liquidity levels that the outflows from the funds require.

Mission

The AP Funds' management mission means that the effects on the pensions of the automatic balancing should be limited, because it is only through this that the AP Funds' return is linked to outgoing pensions. The AP Funds will generate a high return while at the same time the risk will be low, with the basis of the trend in disbursements.

The mission also requires equal treatment of all generations, in compliance with the principle of 'generation neutrality'.

A strong development in the national economy and the population demographic places less stringent demands on a high return in the AP Funds and vice versa. In all, the buffer funds account for approximately 15 per cent of total pension assets. The other 85 per cent is the value of the so called contribution assets, that reflects the future value of the current pension payments.

Purpose linked to pension system

The purpose of the Fund's investment activities, as determined by its Board of Directors, is to minimise the expected negative effect on future pensions as a result of the 'brake'. The time



frame the Fund is starting from in the search for generational neutrality is 30 years.

Based on an analysis of the pension scheme, the Fund selects a strategic portfolio that represents the asset's composition which is assessed to have the best condition to achieve the goal during the selected time frame. Long-term assumptions about return and risk for the different assets, as well as how these returns are related to the development in the national economy and demographic, are at the very heart of the analysis.

The strategic portfolio that AP2 has established is expected to generate a long-term average annual real return of 4.5 per cent. The return may vary significantly over time.

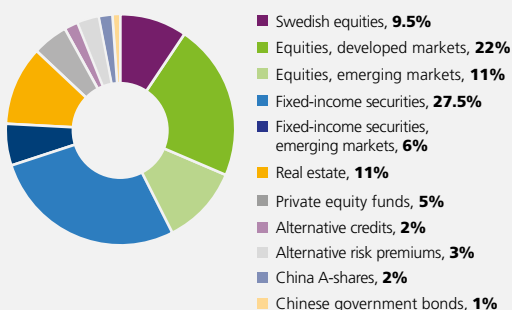
In the past ten years, AP2 has generated a return of 79.1 per cent, corresponding to an average annual return of 6.0 per cent. Adjusted for inflation, this corresponds to an annual real return of 5.0 per cent.

The Fund's vision

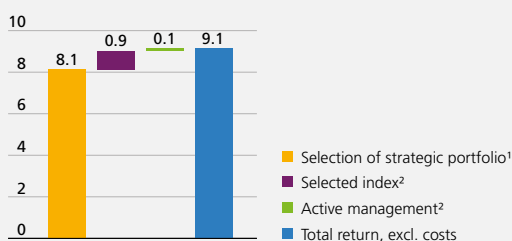
AP2's vision, world class management, works both as fuel and a signpost for the Fund's employees. It helps the Fund to motivate and attract employees, prioritise and make the correct decisions and covers all parts of the Fund's activities.

AP2's strategic portfolio 2017

(% of Fund capital)



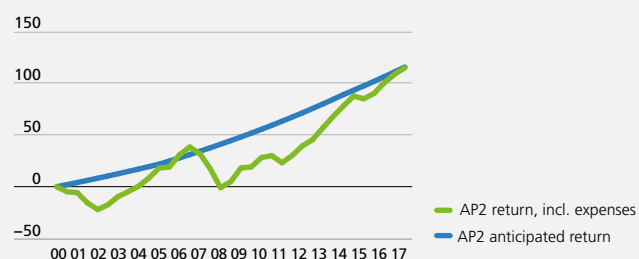
AP2's value creation, %



¹ Contribution from alternative investments 0.1 per cent and from market-listed portfolio 8.0 per cent.

² Market-listed assets.

Accumulated real return, since start, %



STRATEGY

Long-term investment strategy

The AP Funds' portfolio management activities have made a positive contribution to the national pension system and the trend in pensions. Since its inauguration, AP2's chosen management strategy has generated SEK 235 billion. During 2017, the Fund made some changes to the strategic portfolio. The Fund has among other things decided to introduce new multi-factor indices for the internally managed foreign shareholdings which, in addition to being expected to contribute to better risk adjusted returns, systematically integrate ESG factors into the strategic equity portfolio.

Over time, AP2 believes that around 90 per cent of the return on invested assets will derive from the composition of the strategic portfolio, and the remaining 10 per cent from active management. The annual return on the Fund's portfolio has amounted to 6.1 per cent per year since the buffer funds were started.

Value-generation strategy

AP2's strategy is based on a step-by-step approach to value generation: choice of strategic asset allocation, selection of index and active management.

This approach is based on a set of principles, or Investment Beliefs. These describe the Fund's view of how financial markets function and the opportunities and potential they present for generating a solid return on investment.

AP2's Investment Beliefs are as follows:

1. The financial markets are not entirely effective.
2. The valuation of equities returns to its own average in the long term.
3. Diversification is the only safe 'free lunch' in financial portfolios.
4. There are in principle only two basic sources of value generation in financial portfolios: systemic exposure to risk premiums in the markets and value-generating active management.
5. A long-term investment time frame makes risk taking easier.
6. An AP fund's mission and goal create special investment opportunities.
7. By being a responsible owner and investor, values can be both protected and created.
8. There is a premium for illiquidity.

9. People and culture are critical success factors.
10. Stable investment processes are an important prerequisite for good results.
11. An early exposure to new strategies can create added value in asset management.
12. Organisations with high cost efficiency provide better long-term results.

ALM model developed in-house

AP2's strategic portfolio is produced with the support of an in-house developed Asset Liability Model (ALM), which simulates the development in the pension system and in the financial markets. The model makes it possible for the Fund to calculate how different asset compositions can be expected to influence future pensions. This also enables the model for the Fund to select the strategic portfolio that can be expected to provide the best target fulfilment for the 30-year time frame that the Fund is based on, i.e. to minimise the negative effects of the so called brake.

The ALM model simulates in more detail various growth trajectories, including trajectories for the asset classes in the Fund's portfolio, for Swedish inflation, for the employment rate and for salaries. The simulations take place, in very simplified terms, based on assumptions about the expected average development of each and every one of these variables, about the expected variation of these on average, as well as the dependency between the different variables.

The indicators that are critical to pension system growth are calculated based on the simulations. The most important indicator in the ALM model is the balance ratio, i.e. the ratio between the pension system's assets and pension liability, which determines

when and if the automatic balancing is activated. Through optimisation, the portfolio is finally identified which, based on the calculated key performance indicators, best meets the overriding goal to minimise the anticipated future pension shortfall as a result of automatic balancing.

Controlled risk

An important factor governing the composition of the strategic portfolio is the fact that the AP Funds jointly account for approximately 15 per cent of the national pension system's combined assets. The largest part (85 per cent) derives from the contribution assets, which can best be compared to index-linked bonds. This means that the AP funds can and should accept a higher degree of risk in their portfolios. The pension system in its entirety has a very limited exposure to risk in the financial markets. A degree of controlled risk is necessary to be able to meet the assignment from the Swedish Parliament and the goal decided by AP2 for investment activities. This is why the Fund has invested in for example equities and credit bonds, which offer potentially higher returns although incurring a higher risk compared to securities such as government bonds.

Long-term diversification of investment strategy

AP2's long-term investment strategy and strategic portfolio have been subject to constant development from the start. A cornerstone of this process is to increase the spread of risk without compromising the potential future return. In 2007, the Fund intensified its efforts to achieve the long-term diversification of its investment strategy and primarily reduce its concentration on mature equity markets. This took place by introducing asset classes and strategies that fall outside traditional investment sectors. This change of course in investment strategy is long-term and has taken several years to develop.

Changes in the strategic portfolio

In 2017, AP2's Board of Directors reached several decisions concerning the strategic portfolio and its composition:

Increased allocation to Chinese A-shares

AP2 has since 2013 invested in Chinese A-shares, within the framework of the Fund's so-called QFII quota (Qualified Foreign Institutional Investor). The investment was initially limited, as it concerned a new market with partly unique conditions. As a result of the good experiences of the investment and with the support of the ALM analysis, the allocation however doubled in 2017, from one to two per cent, at the same time as the allocation to equities in developed countries was reduced in the corresponding extent. The index suppliers have not yet fully included Chinese equities in their indices for the emerging countries on the same conditions as for other countries. In the event of a full inclusion, the proportion of Chinese equities in MSCI EM would amount to a significant proportion of indices. As a result of the Fund's increased allocation to Chinese equities, its share of the Fund's overall allocation corresponds to equities in emerging countries better than the expected future proportion in MSCI EM.

Initial allocation to Chinese government bonds

In 2017, AP2 made an initial strategic allocation to domestic Chinese government bonds of one per cent of the strategic portfolio. The market in question is one of the absolutely largest bond markets in the world, but has only been available for foreign investors since very recently. Chinese government bonds enjoy a good credit rating and are considered to be able to contribute with diversifying the overall portfolio. At the same time, it is a new market with partly unique requirements, as was the case when the Fund made its initial allocation to Chinese equities during 2013.

Internally developed multi-factor indices for foreign equities

Within equity management, AP2 has for a long time deviated from traditional market value weighted indices. The intention is that through exposure to systematic risk factors and premiums, the long-term, risk-adjusted return will increase.

Previously, the Fund has applied a number of different single factor indices in the management of foreign shares. During the year, the Fund has further developed the effort by instead devel-

oping multifactor indices which integrate exposure to several different risk factors within the same index. A central part of these new indices is that they integrate factors related to the ESG directly in the index composition, such as factors related to carbon dioxide emissions, equality and pollution. For example, these new indices are expected to reduce the carbon footprint without weakening the expected risk-adjusted return. The Fund's Board of Directors has decided that these new indices should be included in the management at the beginning of 2018. Read more on page 22.

Choice of index

AP2 regards the index choice, i.e. the composition of underlying instruments that make up the Fund's strategic allocation to each asset class, as part of the strategic decision-making process. The Fund has largely replaced the broad and more traditional cap-weighted indices with more specialised indices, which in a more risk effective way is expected to contribute to the future return. This is because a cap-weighted portfolio tends to award a higher weighting to those individual equities with the highest valuation, sometimes reflecting the fact that the share may be overvalued, and vice versa.

The Fund therefore designs its benchmarks partly according to different weighting methods. Examples of this are those new multifactor indices described above. This is expected to lead to less portfolio concentration and a higher risk-adjusted return over time.

Active management

Active management is based on the assumption that market inefficiencies exist and that there are a number of assets that are wrongly priced. By identifying these and utilising the Fund's sustainability, active management can increase the return compared with portfolio management that is entirely index driven. For this reason, AP2 employs active elements in its portfolio management. This active management is employed both in-house and via external managers. In the last five years, the average active management has generated 0.4 per cent, which is equivalent to SEK 3.9 billion.

“ AP2's strategy is based on a step-by-step approach to value generation: choice of strategic asset allocation, selection of index and active management.

In-house portfolio management

AP2 has several asset classes under in-house management, concentrating resources on areas that it believes offer the greatest chance of success, based on the market, the available experience, the competence and the processes. Of the Fund's assets, 83 per cent are managed in-house.

The following asset classes are managed in-house:

- Swedish equities
- Foreign equities on developed markets
- Foreign equities on emerging markets
- Emerging-market bonds
- Swedish bonds
- Foreign government and credit bonds on developed markets
- Global green bonds
- Tactical asset allocation
- Real estate (via directly-owned companies)
- Parts of the portfolio of alternative risk premiums.

The active management of Swedish equities during 2017 was conducted under two mandates. Swedish and foreign fixed income securities are also actively managed in-house, together with emerging-market bonds. Foreign equities, global credit bonds and Swedish fixed-income securities are quantitatively managed actively, involving the use of mathematical models to locate market inefficiencies.

External portfolio management

The majority of AP2's external mandates are active. The Fund employs external asset managers for asset classes and mandates where the necessary in-house resources are lacking.

During 2017, AP2 employed external managers for the following areas:

- Global equities
- Global tactical allocation mandates
- Alternative investments (private equity funds, real-estate funds, Chinese A-shares, alternative credits and parts of the portfolio of alternative risk premiums).

The procurement of external fund managers is based on criteria such as investment style, quality and analytical approach, organisational structure, staffing, ESG, costs and historical performance.



Read more >>> on the the Fund's [website](#).

Benchmark index for the strategic portfolio, 31 December 2017

		Index
Equities	Sweden	SEW: 'Equal Weighted Sweden Index' CSRX: 'Carnegie Small Cap Return Index'
	Foreign equities	MSCI World GDP Weighted ¹ , MSCI World ¹ , MSCI World Minimum Volatility Weighted ¹ , MSCI World Value Weighted ¹ , MSCI World Risk Weighted ¹
	Emerging markets	MSCI Emerging Markets ¹ , MSCI Emerging Market Value Weighted ¹
Fixed-income securities	Swedish nominal fixed-income	SHB Swedish All Bond ⁴
	Foreign government bonds	Barclays Global Government ²
	Global credit bonds	Barclays Global Credit ⁵
	Government bonds in emerging markets	JP Morgan EMBIGD ⁶ , JP Morgan GBI-EM Global Div ^{3,6}
	Global green bonds	Barclays MSCI Green Bond Index
Alternative investments	Swedish real estate	SFIX Svenskt Fastighetsindex
	Foreign real estate	7 per cent
	Timberland and farmland	8 per cent
	Private equity funds	MSCI World Local currency + 3 per cent
	Alternative credits	Barclays Global Government ² + 4 per cent
	Alternative risk premiums	MSCI World Local currency
	Chinese A-shares	MSCI, China A ¹
	Chinese government bonds	JP Morgan GBI-EM Broad China ⁶

¹ Adjusted index: adjusted after excluded companies and tax levels.

² Adjusted index: excluding Japan and emerging countries as per MSCI.

³ Adjusted index, excluding Russia, weighting of individual countries may not exceed 15 per cent and they may not have a credit rating lower than BBB.

⁴ Adjusted index: excluding bonds with a maturity of more than 20 years, and Kommuninvest.

⁵ Adjusted index: excluding Japan and emerging countries as per MSCI, as well as markets where issued volume is less than USD 500 million.

⁶ Information has been obtained from sources believed to be reliable but J.P. Morgan does not warrant its completeness or accuracy.

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In the last five years, the average active management has generated 0.4 per cent, which is equivalent to SEK 3.9 billion.

ATTRACTIVE WORKPLACE

Employees are vital for the results

AP2's ability to recruit employees, retain them and contribute to their development is essential in achieving its long-term goal. Part of the Fund's long-term strategy is the steady build-up of still more professional and cost-efficient portfolio management, relying on its own in-house resources.

AP2 is an archetypal knowledge-driven organisation, where the specialist competencies, creativity and commitment of its employees are critical to a successful result. As a manager of buffer capital, the Fund is tasked with an important assignment. This places considerable demands on the Fund's good judgement in its day-to-day operations, and the need for transparency in carrying out its duties. These issues are often the subject of internal discussion within AP2. The Fund subscribes to a joint code of values and has clearly established internal policies that govern its professional behaviour.

The Fund is actively working with issues such as equality, diversity, working environment and non-discrimination. The work is based on the Fund's discrimination policy, equality and diversity plan and working environment policy. All employees are informed at the time of employment of the Fund's policies and guidelines. The Fund also maintains a continuous dialogue on these issues.

Culture and values

During the year, the Fund has continued the process of building a robust culture and strengthening its joint values: long-term value creation, responsibility, respect and continuous improvements. This process is intended to clarify and promote consensus

around the Fund's values and to establish the principle that these values should provide guidance in the Fund's day-to-day operations. AP2's culture is notable for encouraging personal responsibility and individuality within the broader framework of a strong team spirit. Ethical behaviour is an important element of this culture and forms a natural part of the Fund's values system. During the year, the Fund carried out training in the regulations concerning hospitality and gifts and the new market abuse regulations.

Work against corruption

AP2 has zero tolerance against corruption and works continuously with preventive work. The Fund has an ethics policy, a compliance policy and a hospitality policy that prescribes how the Fund's employees must behave in these matters.

The preventative work is performed by the Fund's compliance function and takes place among other things through training and preparing internal documents. AP2's managers are responsible for ensuring their employees understand and act in accordance with the policies. This is carried out continuously through information, discussions and conversations. At the same time, all employees are responsible for applying the policies. AP2 has a so called whistleblower function, where employees can anonymously report incidents such as unethical practices. The Fund's General Counsel has overall responsibility for follow-up of how the guidelines are followed and reports to the Board on the key ethical issues concerning the activities and the employee's actions.

Exchanging competence

All employees are offered ongoing skills development within their individual fields of competence. During the year, the in-house training of staff on sustainability issues has continued, with a view to increasing everyone's competence in this area.

“During the year, the Fund has continued the process of building a robust culture and strengthening its joint values.”

AP2 places great importance on collaboration with other investors, internationally as well as in Sweden. During the year, the Fund has engaged in exchanging competencies with a number of different investors, primarily members of the Fund's business network. This includes close collaboration with the New Zealand Superannuation Fund, Generation Investment Management, ABN Amro Pension Fund, Publica Pension Fund and TIAA.

For AP2, active participation in the latest research in the financial sector is a self-evident necessity. As well as carrying out their own research, Fund employees also attend conferences at which research results are presented. Read more about the research that the Fund's employees participated in on the [website](#).

Leadership training

Strong leadership is a key competitive tool in promoting the development and motivation of employees. AP2's leadership strategy defines the skills, attitudes and responsibilities that managers within the organisation are expected to possess.

Working environment and health

AP2 shall strive for a working environment that is so good that each employee is happy and can develop their role. It must also be an environment that minimises risks. It is therefore important that all employees can influence their own work situation. A good and pleasant working environment is a condition of the Fund being able to achieve its goals and be an attractive employer. During the year, the Fund provided working environment training for all managers at the Fund.

Exercise and good health are a crucial aspect of the Fund's corporate culture, and all employees are therefore offered a fitness activity subsidy and regular medical check-ups. Each employee's health is also monitored in conjunction with the annual employee appraisal. AP2 supports activities that help inspire and stimulate a healthier lifestyle.

Diversity

AP2 considers it important that its workforce should reflect diversity in terms of background, experience, age and gender. AP2 evaluates and develops employees' work and skills regardless of age or ethnicity and wants to be an attractive employer for both men and women. Active equality and diversity work in the Fund contributes to increased motivation and satisfaction among employees, which in turn increases the Fund's competitiveness and possibility of generating a good return. It enables men and women to combine work with family responsibilities by offering flexible working hours and working under one's own responsibility. In 2017, three men and no women took parental leave at some point during the year.

Collaboration with Mitt Liv

As part of its diversity work, AP2 supports the organisation Mitt Liv. The organisation is dedicated to increasing diversity and integration on the Swedish labour market. Each year, through the organisation's mentoring programme, five Fund employees gain the chance to become mentors, to assist academics with a foreign background who lack employment appropriate to their professional competence. Through Mitt Liv, all of the Fund's employees received training in diversity issues. In addition, the Fund's managers received separate training in these issues.

Remuneration

To be able to recruit and retain the right staff, AP2 strives to remunerate its employees at a level that is motivating and consistent with the industry at large.



Read more >>> More about **Remuneration** on page 91 and on the Fund's [website](#).

The Board of Directors of AP2 determines the guidelines for remuneration to senior executives. The guidelines are reviewed annually by the Board and shall be compatible with Swedish Government guidelines pertaining to terms of employment as applied at the AP Funds. These guidelines address the actual decision-making process as well as the design and appraisal of appropriate and reasonable remuneration within the Fund. The Board ensures that the remuneration paid to the Chief Executive and other senior executives is consistent with the Board's guidelines.

All employees come under the terms of the collective agreement between The Employers' Organisation of the Swedish Banking Institutions (BAO) and The Swedish Confederation of Professional Associations, JUSEK/CR/CF (SACO).

Recruitment

As a global fund manager operating across a broad range of asset classes, AP2 fosters many specialist roles and creates many career opportunities. AP2 strives first and foremost to recruit from within the organisation and to encourage internal mobility. In this way, specialist skills and expertise can better be utilised. For a number of years, the Fund has cooperated with the School of Business, Economics and Law at the University of Gothenburg, and Chalmers Institute of Technology, enabling them to offer students opportunities of temporary employment on

specific projects, trainee positions and temporary employment during summer vacations. In this way, a good recruitment basis has been created for future employees. Eleven of the Fund's current members of staff have come directly from studies at the School of Business or Chalmers.

Identification of employee-related risks

AP2 will create the conditions for attracting and retaining employees with the expertise and experience required for the activities to be carried out in the best possible way. The Fund's ability to retain skilled and dedicated employees is vital to drive the development in accordance with the strategic plan and achieve the set goals. If the Fund does not have access to the right expertise at the right time, activities and results may be adversely affected.

The Fund therefore works continuously with competence development in order to develop the activities and achieve set goals. In connection with the annual appraisal, the employees' performance and potential are identified. During the financial year, the Fund's managers meet regularly for the purpose of strengthening the quality of leadership throughout the business. In order to identify the focus areas that are expected to increase employee satisfaction and commitment, the Fund regular conducts employee surveys.

Employee statistics

	2017	2016
No. of permanent staff	67	66
Female staff, %	34	33
Female staff in executive management, %	33	29
Average age, years	43	43
Median age, years	44	43
Personnel turnover, %	4.5	7.5
Absence due to illness, %	1.1	2.5



The Fund is working continuously with competence development in order to develop the activities and achieve set goals.

New indices for better and more sustainable pensions

During 2017 AP2's employees designed new indices for the global equities asset class. This means that the Fund at the start of 2018 will have ESG exposure on all internal capital in the foreign equity asset class, totalling SEK 99 billion. This is an important part of the Fund's continued work with implementing ESG factors (Environmental, Social and Governance) in investment decisions. The new indices are fully in line with AP2's mission, as they are expected to give a greater return at a lower risk and at the same time take into account aspects of sustainability.

A basic question for investors has always been how to distribute capital between different assets in the best possible way. For AP2, this is a strategic decision, where the Board decides on the distribution of fund capital of SEK 345.9 billion between different asset classes and which index the asset class will have.

Within the global equities asset class in AP2's quantitative management, which amounts to approx. SEK 99 billion, six different indices have been used so far. Four of these include approximately 1 600 companies in developed countries and two include approximately 800 companies in emerging countries. These indices are so called single factor indices, which means that the weighting of the equities in each index is determined by one equity specific or company specific property. Examples of these properties are the equities' volatility or a company's valuation.

"Selection of index has always been an important part of AP2's investment strategy. An equity index consists of several different equities which are weighted based on a rule. This will give investors an opportunity to distribute their capital wisely," says Tomas Morsing, Head of Quantitative Strategies at AP2.

Two new indices with four properties

At the end of 2016, a project was initiated with the aim of replacing the current six indices with two new ones; one for developed countries and one for emerging countries. These two indices would reflect all the properties that AP2 is seeking exposure to, so-called multi-factor indices. After implementing ESG in the active management of global equities, another goal of the project was also to include exposure to ESG in the index design.

"We didn't think that it was an effective solution to use several different single-factor indices, which research also shows. At the same time, we wanted to add other properties and examine their significance for an index's return and risk," says Claes Ekman, Quantitative Portfolio Manager at AP2.

The project resulted in AP2 deciding to replace the current index structure, which includes several single-factor indices, with two multi-factor indices.

"We analysed which properties that were interesting to have in our new indices and concluded that we wanted to have exposure to four properties, but just two indices. This means that we have designed the indices for the benefit of equities in companies that have a low value and a good ESG profile, and equities whose returns are low volatile and independent of the returns of other equities," says Tomas Morsing.

ESG takes priority

Including exposure to companies with a good ESG profile in the indices has been especially important for AP2. That is why the Fund's new indices consider many different aspects of climate and environment, social factors and corporate governance factors during index construction. For example, equities in companies with low carbon dioxide emissions or that have many women employees are favoured, while equities in companies that are often involved in a variety of controversies or that attempt to devote themselves to manipulative accounting will receive a lower index weighting.

“ Now that we have designed multi-factor indices involving ESG factors, we can say that we are one of the first and have come a long way in this area.

“Our new indices include many properties in ESG. To determine what we should focus on, we have turned to our sustainability strategy, our previous ESG work and to research within the area,” says Tomas Morsing.

Previously, AP2 purchased finished indices from an external party, but the indices will now be designed internally. For this purpose, the Fund has developed a methodology that makes it possible to compare and study how the different properties affect an index return and risk profile.

“When we tested the indices on historical data, we saw that we could evaluate the ESG higher than the other three properties without sacrificing the return or increasing the risk. This is completely in line with our assignment at AP2,” states Claes Ekman.

Many benefits of new indices

The tests showed that the new indices have a better expected absolute and risk-adjusted return than the current indices. This is because they are more widely diversified and provide a significantly better exposure to the four selected properties. Going from six different indices to two also makes the internal management more cost effective and reduces the transaction costs.

“The benefits of our new indices for today’s and tomorrow’s pensioners are many. They have a better expected absolute and risk-adjusted return, reduced costs and take account of ESG in the investment process to an even higher degree,” says Claes Ekman.

With the new indices, all of AP2’s internal management of foreign equities take into account ESG aspects. As a result of this, the Fund’s carbon footprint will decrease.

“We measure the proportion of the carbon dioxide emissions that can be said to be our responsibility by calculating the Fund’s ownership in every company. With the new indices, we will have a significantly smaller carbon footprint than with today’s indices,” said Tomas Morsing.

Far ahead but continued focus forwards

The range of complete ESG indices and multi-factor indices are growing and are becoming more common on the market. However, to date, they have not been able to provide a sufficiently good return. At the same time there is currently a desire among investors to take control of their own indices by designing them in-house.

“Now that we have designed multi-factor indices involving ESG factors, we can say that we are one of the first and have come a long way in this area. This is also confirmed by the great interest in our work from both colleagues in the industry as well as other index suppliers,” says Tomas Morsing.

The next step in AP2’s work with even more sustainable investments is to develop a method that can identify companies with solutions to the challenges of the future, for example, climate change, and which are therefore good investments. Because these companies today are often too small, they are not included in the thousands of companies that the Fund’s quantitative management invests in.

“It will be important for us to identify opportunities that include companies that are future proof. By finding tomorrow’s winner within different green areas, these investments will contribute to pensions with both a better return and sustainability,” says Claes Ekman.



Enterprising women in Ghana pave a new way

Twenty female managers from all over the world visited Ghana one week in May 2017 under the theme of female leadership. Hosting the programme were Access Bank Ghana and FMO (Netherlands Development Finance Company). The aim was to exchange management experiences and to gain a deeper understanding of the needs and challenges of local female entrepreneurs in Ghana. Joining the trip was AP2's CEO Eva Halvarsson.

"It was very interesting to listen to the four female entrepreneurs who we met and to hear about their activities and about being female managers in an African country such as Ghana," says Eva Halvarsson. What these women accomplish in their respective businesses are examples of the development that AP2 wants to support through our commitment together with FMO, Goldman Sachs and IFC in Women Entrepreneurs Opportunity Facility (WEOF), among others. The purpose of the investment is to help to increase access to capital for female entrepreneurs, while at the same time we are creating a good return for the Swedish pension scheme," continues Eva Halvarsson.

WEOF is the first global financing facility of its kind, with the aim of increasing the support to female-owned small and medium-sized enterprises. Research¹ shows that investments in feminine entrepreneurship have positive effects both in terms of improv-

ing communities and their growth. That is to say women are better than men at re-investing profits in the business and using the dividend to provide their families with food and education; factors that are of crucial importance in the fight against poverty.

Diversed businesses with different needs

The visions for the Ghanaian female entrepreneurs were very different as their businesses were at various stages of development. One woman considered listing her large company within the packaging industry, while another needed to borrow money to purchase a whole container of batteries for her car battery company.

"The woman who sold car batteries outside Accra, had together with her two sisters inherited the company from her deceased father and she was highly regarded in her local



“What these women accomplish in their respective activities are examples of the development that AP2 wants to support.”

market. The vast majority of her customers were men wanting to purchase batteries from her and her sisters, because they thought they were both more knowledgeable and reliable than their male competitors,” explains Eva Halvarsson.

Regardless of which phase the entrepreneurs were in, the women in the leadership programme were able to train their skills in promoting their respective companies for the manager of Access Bank Ghana, for the purpose of obtaining loans.

Many challenges

A factor for achieving success as a female entrepreneur in Ghana is, among other things, to reduce the uncertainty factor associated with managing cash. At one of the meetings held between the entrepreneurs and the bank, the bank was able to promise more secure payment management through payments using mobile phones.

Studies² from the UN body UNCTAD show that mobile phones can be a great support for women in developing countries. It is often expected that the women will take full responsibility for house and home, even if they are successful business women. A mobile phone can therefore provide the freedom that they need when they themselves are not so mobile.

Strengthened managers

Even though there are great contrasts and different conditions between Ghana and Western countries from where many of the participating women came, there are also many similar challenges. Examples of similarities are daring to have a greater belief in yourself and your abilities, finding your own personal leadership style and finding a reasonable balance between work and personal life.

The result of the week’s work and the many dialogues between the participants can be summarised in a wider view of everyone’s leadership properties, an inspiration for the future work as leaders and, not least, an increased understanding of how sustainable investments in a tangible way, can contribute to both increased employment and economic growth at the same time as this generates a stable return.

¹ www.goldmansachs.com/our-thinking/public-policy/giving-credit-where-it-is-due.html

² www.sida.se/Svenska/Har-arbetar-vi/Globala-utvecklingsinsatser/resultatexempel/Kvinnliga-entreprenorer/

Active work on international boards

As a global player on the financial market, AP2 has a great deal of interest in driving issues that are important to investors. This may involve supporting and developing regulations and frameworks, or working with cost issues. Through membership and board engagement in several international stakeholder organisations, AP2 will work for rewarding relationships between investors, where experiences about how investors can work with sustainability can be exchanged.

PRI with focus on sustainable management strategy

Principles for Responsible Investment (PRI) is the world's leading proponent of responsible investments. The organisation works to understand the investment effects of environmental, social and governance (ESG) factors and supports investors who have signed PRI's policies to integrate these factors in their investment and governance decisions.

PRI is independent and encourages investors to make responsible investments to improve the return and manage risks better. PRI is supported by but is not part of the UN.

AP2 was one of the PRI's founding signatories when the principles were launched in 2006. As signatory, the Fund undertakes to publicly adopt and work with the implementation of the principles. This is a continuously ongoing process, where sustainability issues are considered both in AP2's role as fund manager and as asset owner. As a major global and long-term investor, the Fund can engage in the development of standards and through membership in stakeholder organisations such as PRI, the Fund can contribute to increasing the level of awareness and knowledge of sustainable investments in the financial industry.

In autumn 2016, AP2's CEO, Eva Halvarsson, was elected to the board of PRI. She believes that "PRI shall work for transparency and act as a knowledge bank, a smorgasbord, of how to build a sustainable management strategy. Through PRI, members can share their knowledge and good examples. Here, AP2 can contribute with its expertise, as we believe that considerable work with correct and informative financial reporting is vital to encourage long-term stable development of the financial mar-

kets." Eva Halvarsson continues: "A goal within PRI is to be able to provide even more region adapted support in the future, because it looks very different between different parts of the world in the way we work with sustainability."

In addition, Anders Strömblad, Head of Alternative Investments at AP2, is a member of the PRI Private Equity Advisory Committee (PEAC) for private equity investments, which is a consultative body for private equity funds within PRI. In 2018 Anders Strömblad will take over as chairman of this committee.

Commitment to the UN's Sustainable Development Goals

AP2 wants to display the importance of institutional investors investing in a way that benefits the work on the UN's Sustainable Development Goals and has therefore got involved in several different initiatives. Read more on page 30. Christina Olivecrona, Senior Sustainability Analyst at AP2, is part of PRI's Sustainable Development Goals Advisory Committee, an advisory committee for the UN's Sustainable Development Goals.

"The sustainability goals convey a new way of looking at investments and have created a framework around sustainability," says Christina Olivecrona.

In order for more investors to see the possibilities with the sustainability goals, PRI has published a report, [The SDG investment Case](#), about why these goals are important for investors.

"One challenge with the sustainability goals is to find measures that makes it possible to follow them up on an aggregated level," says Christina Olivecrona.



Read more >>> More about PRI on www.unpri.org

“ Clear regulations and frameworks around climate are important for all parties.

IIGCC forum concerning climate

For a long-term investor such as AP2, climate is an important issue. The Fund has for many years been a member of the Institutional Investor Group on Climate Change (IIGCC), which is an investor led organisation with more than 140 European investors as members. IIGCC takes action for a prosperous low carbon society. Through IIGCC, investors can reinforce their influence on companies, decision makers and other investors. Clear regulations and frameworks around climate are important for all parties. As the Paris Agreement has been signed, IIGCC is increasing its focus on supporting investors in their work on climate change, in line with TCFD's recommendations.

“IIGCC is an excellent forum for promoting the investors' requirements on regulations, making decision-makers aware of the climate issue and exchanging information on climate-related investments,” says Christina Olivecrona, board member of IIGCC.

International organisation within private equity

International Limited Partner Association (ILPA) is the only global organisation in the private equity area that is exclusively engaged in the promotion of the investors' interests. ILPA currently has approximately 500 members globally and virtually all large institutional investors in private equity funds are members. To prevent all forms of conflicts of interest and similar, the business is financed by its members.

ILPA's overall goal is within four main areas:

- **Resources.** Develop 'best practice' in the private equity area, which among other things includes reporting, contractual items, due diligence templates and develop principles for governance and insight into private equity funds.

- **Voice.** Inform among other things, legislative and regulatory financial bodies globally about the private equity industry and its importance for investors.
- **Education.** Provide tailored training with different levels and directions for those working with private equity investments.
- **Community.** Create a forum where investors can meet and exchange experiences.

“At the start in 1990, ILPA was a network for US investors which then, as now, aimed to share experiences. The organisation has grown a lot since the start and is currently about to reach 500 members from over 50 countries. One of the major challenges at the moment for ILPA, whose membership is growing very rapidly, is to meet all new member's needs as investors. I think ILPA has succeeded with this as the knowledge is continually being expanded and the range of courses and conferences is continually increasing,” says Anders Strömblad, board member of ILPA.

At the annual ILPA summit meetings, investors and managers from all over the world meet for the purpose of constructively improving and developing the private equity industry. The organisation also hosts membership conferences and several local events around the world. In order to create qualitative networking possibilities and an environment that encourages long-term relationship building between investors, seminars are arranged in order to make thorough investigations within different appropriate areas.

Anders Strömblad is also involved in the ILPA Industry Affairs Committee which assists with information about private equity for salaried employees (for example, in the EU), politicians and regulatory authorities.

AP2's sustainability work

AP2's sustainability work comprises the environment, ethics, social issues and corporate governance. The purpose of the Fund's sustainability work is to create and protect values. As a asset manager, the goal is to address a number of factors involving the environment, ethics, social issues and corporate governance, as they provide a better basis for analysis and investment decisions, as well as offering diversification. The Fund is also committed to maintaining a high level of confidence by promoting a solid ethical and environmental approach, while also contributing to the development of sound practice in fund management issues.

By actively working with and integrating environmental, ethical, social issues and corporate governance in AP2's activities, values can be created and protected. The term that the Fund uses to embrace these issues is sustainability. Among investors, the abbreviation ESG (Environmental, Social and Governance) is also used. By including sustainability aspects in analyses and investment processes, the Fund generates a broader and better decision data.

AP2's framework

AP2 is a government agency, whose activities are regulated in the Act (2000:192) concerning National Pension Funds. The AP Funds' mission includes generating a high return while maintaining a low level of risk. The investment strategy shall make provision for the impact of pension disbursements as well as the liquidity requirement associated with outflows from the funds.

It is important that AP2 has public confidence and acts in a responsible manner. This is mirrored in the preparatory work in the AP Funds Act, where it is stated that the AP Funds must consider ethics and environment without sacrificing the goal of providing a high return. For the Fund both sustainability and responsible action are high priorities. A proactive approach to the environment, ethics, social issues and corporate governance are the means to achieve the goal of a good risk-adjusted return.

Governance policy

AP2's operative work with sustainability and governance issues are based on the Fund's governance policy and its ten principles. These principles include structural issues, corporate governance and the environment and ethics. The governance policy also describes the Fund's core values and policies that the Fund has signed up to, as well as guidelines and initiatives that the Fund had signed or uses in its sustainability work. The governance policy is established annually by the Board and is published on the Fund's [website](#).

The governance policy clarifies what AP2 expects of the companies that the Fund is a partner in, but also what the companies can expect of the Fund as owner. Regulatory framework such as the OECD's guidelines for multinational companies and corporate governance, the United Nations' Global Compact, the Swedish Companies Act and the Swedish Code of Corporate Governance is the basis for the Fund's work with corporate governance.

Implementation of PRI

AP2 supports and works to implement the UN supported Principles for Responsible Investment, PRI. The Fund signed these principles back in 2006, when they were launched. Implementing these principles is a continuously ongoing task, where regard to sustainability issues is taken into account in both the Fund's role as fund manager and as asset owner. PRI provides various tools and activities to support investors in implementing the principles and making it easier for investors to work together. Approximately 1 800 investors have signed these principles. PRI carries out an annual survey, where all signatories report on how they work with implementing the principles.

AP2 also works to implement the Principles for Responsible Investment in Farmland. These were prepared in 2011 by AP2 together with a group of international investors. To increase transparency, PRI compiles a separate report for farmland investments. More information is available at www.unpri.org

AP2's reporting on the implementation of these principles can be found on the Fund's [website](#).

Organisation and allocation of responsibilities

AP2's Board establishes guidelines and policies for governance issues and has tasked the Fund's CEO to handle these in the operating activities. To assist with corporate governance issues, the CEO has an governance group with members from the Fund's executive management, the Head of Swedish equities

AP2's management of sustainability issues

Decision level	Category	Governing document	Follow-up	Goals and outcomes 2017	
THE BOARD OF DIRECTORS	Strategy	Activity plan, including ownership policy	Followed up by the Board of Directors and executive management.	Goal: Long-term average annual real return of 4.5%.	Outcome: 9.0% in five years, 5.0% in ten years.
	Return		Followed up by the Board of Directors and executive management and reported in the annual and semi-annual report.		
	Conduct rules	Ethics policy	The General Counsel has overall responsibility for follow-up of how the guidelines are followed and reports to the Board of Directors on the key ethical issues concerning the activities and the employee's actions.	Goal: No form of corruption, giving or taking bribes.	Outcome: 0 cases.
		Compliance policy			
		Principles for hospitality and gifts			
CEO / EXECUTIVE MANAGEMENT	Sustainability	Policy for human rights	The work is followed up by the Board, executive management and steering groups.	Goal: See page 49.	Outcome: See page 49.
		Financial sustainability areas		Goal: See page 38.	Outcome: See page 38.
		Environmental policy		Goal: Increase number of train journeys Gothenburg-Stockholm. Reduce printouts.	Outcome: See page 54.
	Staff manual	HR policy	The CEO is responsible for drawing up the policies and plans. The overall work is planned and followed up by the Fund's HR manager.	Goal: Increasing the proportion of female managers in AP2.	Outcome: 35%.
		Equality and diversity plan			
		Discrimination policy		Goal: No employee at AP2 shall be subjected to discrimination.	Outcome: 0 cases.
		Work environment policy			
		Entertainment policy			

and the Fund's Sustainability Analyst. This group is responsible for strategically and operatively pursuing work concerning corporate governance.

The Fund's sustainability work (ethics and environment) is driven by a sustainability group consisting of the Fund's Chief Investment Officer, Chief Strategist, Sustainability Analyst and Head of Communications. This group is responsible for strategically pursuing work with sustainability issues. The issues are operationally pursued primarily within the Fund's asset management organisation.

The governance group and sustainability group define goals and action plans for their respective areas of responsibility and continuously follow up how the work proceeds.

Both the governance and the sustainability group's work is reported to the Fund executive management and is established on an ongoing basis among the Fund's other employees. AP2's Board receives at each board meeting, a report on the Fund's sustainability and corporate governance work.

Core values for sustainability and corporate governance

AP2's assignment is to create a long-term high return at a low risk and thereby contribute to safe pensions for current and

future Swedish pensioners. The Fund's opinion is that a long-term high return at a low risk can be achieved if regard for sustainability is part of the activities, both in the organisation itself and in the investment process. As part of the Swedish pension scheme, AP2's core values are based on the Swedish government's values, where democracy and sustainable development are central parts in accordance with the wordings in the Instrument of Government. The Fund's core values are also based on the international conventions that Sweden has signed. Read the full core values for sustainability and corporate governance on the Fund's [website](#).

Awards

In 2017, AP2 received an award from Responsible Investor in the Best's Sustainability Report category. The Fund also won, together with the First, Third and Fourth AP Fund and pension funds from the Netherlands (PGGM, APG, ABP, bpfBOUW, SPW, MN, Actiam and Kempen Capital Management) an award for the common statement about the importance of institutional investors investing in solutions that support the UN's global goals for sustainable development.

The UN's Sustainable Development Goals

In September 2015 the UN's 193 member states unanimously adopted 17 global sustainable goals. The goals, which should be achieved by 2030, are intended to abolish poverty and create a sustainable world. The 17 global goals have been divided into 169 milestones and each milestone is measured with various indicators. Each country is responsible for implementing and following-up its sustainability goals. To achieve the goals, it is required that governments, civil society and business work together.

The 17 sustainable goals are integrated and indivisible, which means that no target can be reached at the expense of another and that success is required in all areas in order to achieve the goals. AP2 has chosen to express its contribution such that the Fund potentially contributes to the goals through its sustainability work and several of the investments that the Fund makes. In the long run, the Fund wants to measure this contribution and work is ongoing, among other things, within GRI (Global Reporting Initiative) and PRI (Principles for Responsible Investment) for producing indicators for investors.

The Rise Fund

During the year, AP2 invested in The Rise Fund private equity fund, which is managed by TPG Growth. The Rise Fund amounts to USD 2.1 billion in commitments primarily from global institutions, making it the largest so called impact fund that has ever been established. It aims to achieve measurable, positive social and environmental results and a marketable financial return. All investments should have a positive impact on at least one of the UN's global Sustainable Development Goals. The Rise Fund measures the specific size of the impact a potential investment is expected to have during its investment lifecycle, with a focus on the impact of the result as defined by the UN's global sustainability goals.

During 2017 The Rise Fund made seven investments in India, Latin America and North America. All have been within The Rise Fund's seven focus areas: training, energy, financial services, food and agriculture, TMT, health care and infrastructure in emerging countries.

Among the investments made there is a company in India for the production of milk that has a positive impact on three of the sustainability goals (goal 1 No poverty, goal 2 No hunger and goal 3 Health and well-being). Another example is a company in Latin America that provides training with a technological focus.

Active commitment

AP2 is also committed to the goals in other ways. The Fund's CEO, Eva Halvarsson, has on a number of occasions reported how the Fund's investments contribute to the goals, including at PRI's annual conference in Berlin and at a seminar arranged by Goldman Sachs in

London, among others. Eva Halvarsson has also conducted several interviews, mainly in foreign media, regarding the Fund's work.

The Fund's sustainability analyst is also part of the PRI's Advisory Committee for the UN's Sustainable Development Goals. Read more on page 26.

During the past year, AP2, together with some of Europe's largest pension fund managers, signed an official position on the importance as an institutional investor of investing in solutions that contribute to the UN's goals for sustainable development. The Fund thinks it is important to have a common definition of Sustainable Development Investments and in the official position encouraged other large institutional investors to take similar measures. Last year this initiative received the Responsible Investor award.

During 2017 the Fund signed the "Stockholm Declaration" initiative. Through the initiative, both Swedish and international investors announced that the UN's Sustainable Development Goals will constitute a central framework to work with applicable investments up to 2030.


In autumn 2016 AP2 sent a letter to the chairpersons of around 40 Swedish companies, in which the Fund encouraged them to relate their activities to the UN's 17 global Sustainable Development Goals and report on their approach to the goals by this year's general meeting. In dialogue with the companies, the Fund has followed this up, both prior to and at the 2017 AGM. Read more on page 58.

Largest expected impact

AP2 has chosen to report a selection of its investments, and which goals they have the greatest expected impact on, by using the document that the Dutch pension managers APG and PGGM produced – Sustainable Development Investments, Taxonomies. The Fund intends to develop this reporting in the future. In the Council on Ethics' report, which will be published in spring 2018, the AP Funds will report on which sustainability goals the Council on Ethics' dialogues will primarily have a potential impact on.

The UN's sustainability goals that are relevant for each section are featured on several of the following pages. The selection of these goals has been made partly with the help of Platform 2030.

Examples of AP2's investments with contributions to the UN's Sustainable Development Goals

The UN's sustainable goals	The 169 milestones, investible	Investment area	Example of investment opportunity	AP2's investment
2 ZERO HUNGER 	2.4 Sustainable food production systems and resilient agricultural practices that increase productivity and production.	Production and productivity.	Sustainable agriculture, farmland.	Approximately 2.5 per cent of AP2's managed assets is invested in farmland. Sustainability issues are central to these investments. Please refer to page 26 for further information.
	2.5 Maintain the genetic diversity of seeds, cultivated plants and farmed and domestic animals.	Organic agricultural investments and food products.	Organic farming, organic processing and retailing.	AP2 has invested in Teays River Investments which, among other things, via Aurora Organic Dairy, produces organic dairy products in organic dairy farms in the United States. Aurora is one of the USA's largest producers of organic dairy products.
4 QUALITY EDUCATION 	4.3/4.4/4.5 Gender, vulnerable and disabled equal access, affordable tertiary and vocational education.	Finance for access to education.	Microfinance funds and affordable finance/loans/credits.	AP2 has invested USD 20 million in a social bond issued by IADB which finances loans to projects in Latin America and the Caribbean. The bond aims to combat poverty by improving the quality of children's education and helping young people into the labour market.
5 GENDER EQUALITY 	5.5 Ensure women's full and effective participation and equal opportunities for leadership.	Exceptional and externally recognized approach to promote women into leadership positions.	Microfinance funds that target women.	AP2 has invested USD 30 million in Women Entrepreneurs Opportunity Facility (WEOF), which is a partnership between Goldman Sachs 10 000 Women and IFC (International Finance Corporation), in order to increase the availability of capital for female entrepreneurs in emerging countries.
7 AFFORDABLE AND CLEAN ENERGY 	7.2 Increase share of renewable energy.	Renewable energy.	Electricity and/or heating generated from wind, solar, biomass, geothermal, hydro, waste, and/or tidal sources.	AP2 has invested, among others, in private equity funds with a focus on renewable energy: Generation Climate Solution, R/C Pattern Energy Feeder and Riverstone Renewable.
11 SUSTAINABLE CITIES AND COMMUNITIES 	11.1 Access to safe and affordable housing and basic services.	Affordable housing.	Public/private partnership to build social housing and student housing.	AP2 has invested in a social bond issued by the Dutch bank NWB. The ambition with the bond is to contribute to the financing of the loan for residential buildings and develop solutions for cheaper accommodation for citizens with low incomes and groups that have difficulty in finding accommodation.
	11.5 Reduce impact of disasters.	Reduce economic losses.	Catastrophe (re)insurance, catbonds.	AP2 invests in alternative risk premiums. The strategies that are included in the portfolio are, among other things, premiums for reinsuring insurance companies, so called catastrophe bonds.

Inspired by APG and PGGM's document Sustainable Development Investments, Taxonomies.

Dialogue as primary tool

As an active asset owner and asset manager, dialogue is an important tool in relation to companies and society in general. AP2 has regular dialogues with its external managers as well as Swedish and foreign companies in issues concerning the environment, ethics and corporate governance.

Collaboration with other investors is important in order to achieve success in dialogues with companies, but also for promoting a trend toward responsible investments. AP2 collaborates with both Swedish and foreign institutional investors.

The AP Funds' Council on Ethics ten years

Dialogues with foreign companies are coordinated through the AP Funds' joint Council on Ethics. The Council on Ethics is a collaboration between the First, Second, Third and Fourth AP Fund, which was launched in 2007. The companies with which the Council on Ethics conducts dialogues are identified primarily in conjunction with the Fund's biannual screening of its total shareholdings, with a view to determining whether any portfolio company is in contravention of an international convention. This screening is conducted by an external consultant. This work is based on the principles of commitment, action and change, with the intention of making a difference. The Council on Ethics identifies companies that can be linked to breach of conventions and focuses on persuading such companies to deal with confirmed breaches and to implement systems and measures to preclude future violations. Dialogue is a vital tool in enabling the Council on Ethics to influence corporate behaviour. When companies in which the Fund has invested can be linked to the breach of an international convention, the Fund's core strategy is to exert its influence as an investor to ensure that such violations cease, that systems designed to prevent any recurrence are implemented – and that measures are taken to prevent any future violations. Through its commitment and by deploying its power as a major investor in reacting to breach of international conventions, as well as demanding change, the Fund can make a difference. Only in cases where this cannot be achieved the Fund will consider excluding its holdings in the company.

The Council on Ethics has preventive and reactive investor dialogues with companies all over the world.

In 2017, the AP Funds' Council on Ethics celebrated ten years and in connection with this two seminars were arranged where the speakers included Al Gore and Johan Rockström, among others.

Work against corruption

The work against corruption is and remains an important issue for the Council on Ethics, because corruption undermines the legitimacy and sustainability of the economic system. The Council on Ethics conducts dialogues with a large number of companies, and virtually all proactive project the Council on Ethics works with include issues on anti-corruption.

The Council on Ethics' annual report for 2017 is published in April 2018. Read more at www.etikradet.se

Collaboration with other investors

In addition to the collaboration between the AP Funds in the Council on Ethics, AP2 is collaborating with other Swedish and foreign investors. During the year, the Fund has also exchanged ideas about integrating environment, ethics and corporate governance aspects within asset management with Generation Investment Management and a number of other players in the Fund's network.

AP2 is also a member of, and supports different Swedish and international initiatives in the environment, ethics and corporate governance. The Fund works with other investors to influence new legislation, primarily within corporate governance. These collaborations are becoming increasingly important in being able to influence and make changes, and thereby improve the shareholder value in the long-term.

Collaboration on the climate issue

Through its membership in IIGCC (Institutional Investors Group on Climate Change), AP2 cooperates with other European investors on climate issues. One of the Fund's employees is also a board member of IIGCC's board. The aim is to promote the investors' voice on climate change and engage companies, authorities and other investors to be aware of long-term risks and opportunities that arise in connection with climate change. The climate issue is important for AP2 as a long-term investor. There is currently a high degree of uncertainty concerning future regulations and frameworks for reducing greenhouse gas emis-

sions and stimulating alternative energy sources. This makes it difficult for companies to make profitable investments and for the investors to calculate the risks and returns. IIGCC is an efficient platform to promote the investors' requirements in the area of climate change. It is also a good way for the Fund to get the latest information about different climate related investments. More information at www.iigcc.org

More information about AP2's memberships and initiatives on the Fund's [website](#).

Excluded companies

If AP2 has reason to suspect that any of the companies that the Fund has invested in, are seriously and systematically in breach of an international convention that Sweden has entered or has expressed an intention to enter, the facts of the case should be investigated. This includes a dialogue with the company in question. If the suspicions are confirmed, the company should be encouraged to provide an explanation and develop an action plan.

In its assessment of the case, AP2 shall take account of the nature of the event and any measures that have been taken (or should be taken) to ensure that the event does not happen again. If the contacts with the company do not yield a satisfactory result, the Fund shall after an overall assessment decide whether the company shall be excluded. The Fund may also decide on exclusion if it considers the circumstances to be of such a serious nature that exclusion is required, even though no violation of conventions is present or can be detected.

Since 2014 the Council on Ethics has introduced a time limit of four years for reactive dialogues conducted with companies where breach of conventions have been verified by external experts. If the purpose of the dialogue has not been achieved within four years, the Council on Ethics recommends that the AP Funds divest of the company.

AP2 has decided to exclude 14 companies that violate the international conventions and where the dialogue with companies has not led to improvements. The Fund publishes a list of these companies unlike when the Fund divests from companies, which is a

“ AP2 has decided to exclude 14 companies that violate international conventions and where the dialogue with companies has not led to improvements.

purely financial decision. Information on which companies the Fund has excluded is available on the Fund's [website](#).

To follow up the financial contributions of the exclusions, AP2 in 2017 developed a method to compare the return for MSCI World, excluding and including the excluded companies. The return contribution is –0.27 per cent after having excluded a companies due to breach of conventions, which belongs to MSCI World since September 2006. These exclusions correspond on 31 December 2017 to 0.7 per cent of MSCI World and include a total of 18 companies during the period 2006 to 2017.

Contribution to the UN's sustainability goals



Stakeholder dialogue and materiality analysis

AP2 is a central part of the state income pension system. The mission as a buffer fund means that the Fund will provide a long-term high return, which helps to secure the Swedish national basic pension for current and future pensioners, and thereby contributes to the balance in the pension system. The mission also means that the Fund shall take into consideration aspects of sustainability.

Through their activities and investments, the AP Funds have an impact on people, the environment and society. In order to identify the most important sustainability issues, the First, Second, Third and Fourth AP Fund in 2017 decided to carry out a materiality analysis.

Stakeholder dialogue

A central part of the analysis is a dialogue with representatives of the funds' most important stakeholder groups, which is largely affected by or affects the funds' activities. The stakeholder dialogue was undertaken in the form of a workshop with approximately 60 people who represented the funds' principles (representatives from the Ministry of Finance and the pension group), beneficiaries, society, industry colleagues, suppliers, employees and portfolio companies.

The funds' goals with the workshop was to identify the stakeholders' expectations and prioritised issues, get feedback on the funds' current sustainability work and take advantage of the stakeholders' thoughts about the continued work on sustainability.

The common dialogue also gave the participants new skills. The Funds informed of their common assignment and how it is linked to sustainability. The stakeholders had the opportunity to discuss the AP Funds' sustainability work with people with different backgrounds, interests and expectations of the funds' sustainability work.

Participants in the workshop were asked to freely discuss which sustainability issues they regarded as being especially important for the Funds to focus on. They were also asked to consider and rank the sustainability issues that had been identi-

fied by the Funds in advance. An opportunity was given to supplement with questions.

All stakeholder groups had the opinion that the most important thing is the AP Funds' action in investments and management, because that is where the most significant impact takes place. Long-term return was regarded as an overall goal and not a specific sustainability goal.

Three prioritised issues

It was stated that the selection of prioritised sustainability issues will vary with the different companies and funds that the AP Funds invest in. However, three issues were raised as particularly important and had the highest priority:

- indirect environmental impact
- indirect climate impact
- human rights.

An ethical business approach was considered by several participants to be a prerequisite for the activities. Business ethics and regulatory compliance were prioritised highly by the industry representatives and suppliers, and were also discussed by beneficiaries and the group's community.

Other issues that were considered significant were a sustainable supplier chain, diversity, equality and anti-corruption. All groups except the industry colleagues regarded these to be among the most important sustainability issues.

The industry colleagues emphasised the UN's Sustainable Development Goals, which includes all sustainability issues. Other stakeholder groups saw these goals as a tool and framework for working with sustainability.

The issue of working conditions was mentioned by a number of groups. The industry colleagues also stressed in-house competence and transparency as especially important, along with business ethics and regulatory compliance. The issue of in-house competence was, however, regarded by certain groups to be a tool and not an issue in itself.

Human rights as a term was discussed and from this opinions emerged that there could be a wider concept where issues such as diversity and equality and working conditions could be included.

The direct environment and climate impact was considered to be a lower priority. Issues such as corporation tax and cyber security were also not deemed to be priorities for the AP Funds, compared with the other sustainability issues.

Requests for communication

The stakeholder groups pointed out that the AP Funds can build trust through increased transparency and more active communication. This would not least make future beneficiaries feel secure. Showing the positive relationship between sustainability and long-term return would strengthen credibility.

The importance of collaboration was also raised. Cooperation is required to achieve good effects. This may involve collaboration with other owners or players and may take place in various forms.

Each AP Fund intends to make a refined prioritisation of sustainability issues based on the individual Fund's conditions. This work and anchoring the materiality analyses will continue in 2018.

“ The stakeholder groups pointed out that the AP Funds can build trust through increased transparency and more active communication.

Sustainability in the investment process

Considering sustainability factors in analysis and decision-making processes means integrating sustainability in asset management. In this way, the Fund can also minimise the risk and achieve better conditions for increasing the return. In AP2's opinion, long-term, sustainable companies are also companies that in the long-term generate a good return.

The Fund's basic conviction is that companies with long-term sustainable business models generate a higher long-term value for its owners. Such investments are also, all things being equal, less risky. Companies that integrate factors such as ethics and the environment in their long-term business development will have an advantage compared with their competitors and better conditions to create long-term value for their owners. A proactive approach to the environment, ethics, social issues and corporate governance are therefore means to achieve the goal of a good risk-adjusted return.

The Fund's definition of sustainability

The sustainability programme implemented by AP2 derives from the nature of its mission and involves acting over the long term, to preserve and add value to its invested assets – based on an economic, environmental and social perspective.

Sustainability a part of the management strategy

The Fund's overall goal is that sustainability should be an integrated part of all analysis and decision-making processes. This is work that has been underway in a structured way for several years.

AP2 is responsible both for the management and governance of the capital assets in its care and is actively engaged in addressing environmental, ethical and corporate governance issues from both perspectives. By encouraging portfolio companies to address ethical and environmental issues, AP2 can help them identify the opportunities and risks, at an early stage, that have effects on the return.

AP2 believes that a responsible long-term approach to the environment, ethics and governance enhances the value of companies. By integrating an analysis of environmental, ethical and corporate governance factors with its economic analysis, the Fund's asset managers are able to generate better data for investment decisions.

AP2 has, as manager of Sweden's national pension assets, a responsibility to anyone who has ever worked in Sweden to create a solid and sustainable economic development for the managed assets. The Fund will act in the best way based on the overall mission.

To create a better understanding and knowledge of sustainability issues among the employees at AP2, several seminars and training sessions were arranged during the year. This is important to facilitate integration of sustainability aspects in the activities.

Focus areas

The Fund's sustainability work is concentrated mainly on some prioritised focus areas that the Fund considers to be important for a better long-term return. The purpose of focusing the Fund's resources on a number of areas is to achieve results in areas of financial relevance.

The Fund's overall priority is:

- The integration of sustainability as part of the asset management process.

The Fund's specific focus areas are:

- Climate
- Corporate governance
- Diversity
- Transparency/reporting procedures.

AP2 possesses extensive expertise and experience in these selected focus areas, having been engaged in these issues for a considerable period. The Fund also expects to work with the areas for a long time to come.

The work carried out in these focus areas, will target companies in which AP2 has invested most heavily and/or those in which it controls a substantial interest and in sectors deemed to pose considerable risks in terms of financial sustainability. This is because the Fund will focus on areas and companies which are financially the most important for the Fund. This can take place in collaboration with other investors to achieve improvements for a single company and/or within a sector. The work with the

focus areas also operates internally. This is how the Fund can primarily achieve the overall goal that sustainability should be integrated into all analysis and decision-making processes, which is also in line with the Fund's mission.

A breakdown of the goals in the long and short-term for each focus area as well as activities in order to achieve the goals are specified in the Fund's annual business plan for sustainability and in the action plans for each asset class.

During 2017, AP2 carried out its first materiality analysis. In 2018 the Fund will prioritise the most important issues raised by the stakeholders. Therefore, this year the Fund will also be basing the report on the focus areas that the Fund has earlier prioritised.

Integration of sustainability in the investment process

Asset class	Mapping	Implementation	
		1. Integration in analysis and decision-making processes	2. Internal follow-up/external reporting
Equities			
Swedish equities	●	●	●
Foreign equities	●	↑ ●	↑ ●
Interest			
Fixed-income securities	●	●	●
Fixed-income securities emerging markets	●	●	●
Green bonds	●	●	●
Alternative investments			
Properties			
Farmland	●	●	●
Timberland	●	●	●
Traditional real estate	●	↑ ●	↑ ●
Private equity funds	●	●	●
Alternative credits	●	N/A	N/A
Alternative risk premiums	●	N/A	N/A
Chinese A-shares	●	↑ ●	●

Mapping – The Fund has made a current situation analysis and has identified continued development opportunities.

Implementation

1. *Integration in analysis and decision-making processes* – The Fund's assessment of how long the integration has reached. In externally managed capital, sustainability must be included as part of agreements.

2. *Internal follow-up/external reporting* – Following up of the Fund's sustainability work (incl. external managers).

● Yes

● Partly

● No

↑ Change compared with previous year

A selection of AP2's sustainability goals

Focus area/asset class	Goal	Follow-up method/KPIs	Achieved 2017
ESG integration			
Swedish equities	Evaluate the sustainability work of the ten largest Swedish holdings, based on the Fund's ownership share	Analysis and dialogue must be carried out	✓
Chinese A-shares	Have an active dialogue with the managers about their integration of ESG	Including assessment of reporting	✓
Reporting			
Private equity funds	Increase the number of private equity funds that ESG reports to 75%	Proportion of funds that ESG reports	Achieved 72%
Swedish equities	Increase the response rate of the GRESB survey to at least 50% of the Fund's Swedish listed property companies	Proportion of companies that responded to the survey	Achieved 33%
Traditional real estate	That the Fund's unlisted property companies and funds respond to GRESB's 2017 survey	Proportion of companies/funds that responded to the survey	100% of unlisted companies (4 of 4); 75% of the funds (3 of 4) have responded to the survey
Timberland and farmland	Reporting in accordance with PRI's guidance for responsible investment in farmland	Results of the Fund's survey for the managers of the farmland investments/the managers' own reporting	✓
	Follow-up to ensure third part audit of farmland takes place by the managers in Brazil	Reporting to TCGA	✓
Chinese A-shares	Develop the Chinese managers' reporting on ESG	Reporting from the managers	✓
Climate			
Global equities	Follow up financial climate risk analyses	Based on specific criteria	✓
Traditional real estate	That the Fund's total GRESB score is improved	GRESB score	74 (which is an increase)
Other	Produce and evaluate the Fund's carbon footprint	Based on specific measurement values	✓
	Develop the Fund's attitude to the climate conversion		✓
Diversity			
Swedish equities	That the share of women will increase on company boards where the Fund is sitting on the Nomination Committee	Proportion of women on boards	See table on page 57
Corporate governance			
Swedish equities	Vote in all companies that meet the Fund's criteria for participation in general meetings	Proportion of companies the Fund has voted in	✓
Global equities	Vote in 750 foreign general meetings	Statistics	✓
	Write 50 follow-up letters to companies where the Fund has voted against the Board's proposal	Statistics	✓

Risk system that includes sustainability

During 2016 a sustainability module was integrated in the Fund's risk system, which means that sustainability metrics for listed equities now is readily available. Using this integration, AP2 wants to measure and evaluate the portfolio's sustainability at three different levels, namely through exposure, risk and return attribution. For example, the Fund can measure and report on how its strategic choices of benchmark along with how the active management affect the Fund's sustainability profile. The Fund may also analyse what the sustainability risks are, how they have developed over time and how they have affected the Fund's financial risk and return. By starting to measure and report on sustainability internally, the Fund will increase its understanding of the sustainability metrics and be able to monitor changes in the portfolio. In 2018, AP2 will continue to work out a framework for how the Fund's risk reporting of sustainability should be formulated. Among other things, the Fund will produce both standard and customised sustainability reports for its various equity mandates.

Equities

Swedish equities

A fundamental analysis is used in the management of Swedish equities. This means that companies are valued by forecasting their future development. In an analysis of the companies, consideration is given to sustainability aspects and how they can affect the companies' valuation. This may, for example, be tax issues, forthcoming environmental regulations and corporate governance issues. AP2 is working to increase its competence on how sustainability aspects can affect a company's valuation and share price. This is done, among other things, by the sustainability and equity research analysts working together. During 2017, the Fund made in-depth analyses of sustainability work in ten Swedish companies within different sectors. The purpose of the analyses has been to gain a broader knowledge of the company's risks and opportunities within sustainability. The Fund has held ownership dialogues with companies in connection with the analyses. Because AP2 believes that companies can create and protect values by working with sustainability issues, the Fund considers it important to be involved in the companies' sustainability work. By being an active owner, the Fund can also affect the companies and support them in the development of their sustainability work.

“By starting to measure and report on sustainability internally, the Fund will increase its understanding of sustainability data and be able to follow changes in the portfolio.”

Global equities

AP2's management of global equities takes place primarily through active quantitative management. The models used are produced in-house and contain different factors, including sustainability factors. They are linked to a number of environmental, social and corporate governance factors. The Fund also works to create new indices in which sustainability is a fundamental pillar. Read more about this on page 22.

AP2 has made divestments in global listed companies that the Fund has determined have financial climate risks. This work is based on extensive sector and company analyses, where sustainability issues and financial information are interwoven. The Fund has so far investigated the utility sector, the coal sector and the oil and gas sector. The Fund has divested in a total of 79 companies.

AP2 also has externally managed mandates in global equities, including Chinese domestic equities, among others. The Fund believes that companies and markets in China are not as well examined as more developed markets, which can lead to substantial sustainability challenges when investing in China. The Fund therefore has a close and active partnership with its external managers in China to ensure sustainability aspects are integrated in investment decisions. When selecting managers, questions are asked about the managers' knowledge of sustainability and how they integrate this in their investment process. The Fund is then able to provide assistance with developing the managers' integration of sustainability aspects. This mainly takes place through training conversations with the managers where

the Fund can assist with expertise and tools. Follow-up of the managers' sustainability work takes place partly through a reporting template which AP2 has produced, and partly through sustainability regularly being discussed at review meetings with the managers.

Norm-based screening

All companies that are part of AP2' equity portfolios will be screened twice a year in order to identify companies that contravene international conventions and guidelines. This analysis is carried out by an external supplier and is the basis for dialogues that the Council on Ethics conducts. Read more about the Council on Ethics' work at www.etikradet.se

Private equity funds

Since 2014, AP2 has been represented on the PRI Private Equity Advisory Committee (PEAC), which is an advisory body for PRI's work with private equity funds. The purpose of the committee is to give opinions on strategies and activities, to monitor the implementation of PRI's principles within private equity and help with guidance and common standards.

Sustainability has gained increasing attention and it is clear that private equity companies are working more actively with these issues within the organisation and in the investment process. AP2 has a structured process for analysis, evaluation and follow-up of sustainability in private equity investments. The work with sustainability is a natural part of the process and development takes place continuously through dialogues with private equity funds, participation at conferences and through cooperation with other investors. A summary of 2017 shows that 72 per cent of the private equity funds in AP2's portfolio produce an ESG report, an increase of five percentage points. AP2's goal for 2017 of 75 per cent was therefore not achieved. However, the trend is heading in the right direction, both in terms of the number of reports and the degree of implementation.

ILPA

ILPA (Institutional Limited Partners Association) is the only global organisation for investors in private equity funds that focuses on pursuing issues common to investors in the private equity industry. ILPA has around 450 membership organisations and the total investment in private equity is greater than USD 1 trillion. ILPA provides training, establishes "best practice", conducts its own research and provides opportunities for investors to share experiences.

AP2 has been a member of ILPA for nearly 15 years and now, for the second time, has a seat on the board. The Fund is also involved in ILPA's Public Affairs Committee and was previously active in the training committee. The Fund has signed ILPA's principles which can be divided into three main groups: 1) Alignment of Interest, 2) Governance and 3) Transparency. AP2 has also applied "best practice" which ILPA developed in a number of areas, especially within reporting and thus linked information. The Fund also has a number of employees who completed ILPA's various training courses.

Green and social bonds

AP2 has a high level of ambition for sustainability. One per cent of the strategic portfolio is allocated to green bonds, however, the Fund's holdings well exceed this level.

Sustainability issues will increase in the future and thus interest in both green and social bonds. The interest among issuers and investors continues to increase, mainly with a focus on climate and the green bond market. AP2's portfolio is therefore expected to continue to grow at a business pace. The purpose of green bonds is to finance projects that contribute to necessary adjustments and to mitigate negative effects of climate change. During the year, AP2 invested in a number of green bonds from new issuers, which contributed to diversify the Fund's portfolio and broaden the climate commitment. The Fund is invested in 43 different issuers with projects worldwide, for example, renewable energy, expansion of public transport and rail, energy efficiency of office and residential buildings and water purification.

Social bond for housing

One way to broaden the sustainability work within fixed-income securities management has been to invest in social bonds. AP2 implemented its initial investment in a social bond in 2014. Since then, the Fund has invested in a number of bonds with a focus on social issues. In 2017 the investments increased by approximately SEK 63 million. For example, SEK 85 million was invested in a social bond issued by NWB Bank. NWB Bank primarily lends to the public sector in the Netherlands and the purpose of the bonds is to finance the project planning of housing for people who have difficulty gaining access to accommodation. The Dutch state has established a new government agency tasked with developing residential solutions for citizens with low incomes and groups that have difficulty in obtaining accommodation.

The increased availability of green and social bonds is positive, as the Fund can clearly promote a more sustainable society at the same time as it generates a good return. Substantial resources are required in order for a transition to a more climate effective economy to take place. In addition, green and social bonds will help to increase awareness of sustainability in the financial industry. AP2 has an active commitment and believes it is important to contribute to the development and awareness of the issue. The Fund is represented, among other things, in the government's ongoing investigation to promote the market for green bonds. Cooperation with universities and research within the subject is a matter of course. Since 2017, the Fund has also been represented as an advisor for Yale Initiative on Sustainable Finance (YISF) and Center for International Climate Research (CICERO).

AP2 had holdings in green and social bonds corresponding to approximately SEK 5.7 billion as at 31 December 2017.

Traditional real estate

Many different aspects of sustainability are important for the property sector. Energy is a central matter, because the property sector accounts for almost 30 per cent of global emissions of greenhouse gases and almost 40 per cent of energy consumption. In order to better be able to monitor and evaluate the sustainability work for AP2's investments in properties, the Fund joined the Global Real Estate Sustainability Benchmark (GRESB) in spring 2014. GRESB is an organisation which through an

annual survey assesses seven different aspects of sustainability in real-estate companies and real-estate funds. These are management, policy and reporting, risks and opportunities, follow-up and environmental management system, environmental indicators (energy, emissions of greenhouse gases, water and waste), building certificates and stakeholder dialogues. In the 2017 survey, 850 real-estate companies and funds took part.

AP2 will annually ask its unlisted real-estate companies/funds and all Swedish listed real-estate companies, that AP2 has invested in, to respond to the GRESB survey. In 2017 the Fund's three unlisted companies and three of the four foreign unlisted real-estate funds responded to the survey. Four of twelve listed Swedish real-estate companies responded. This means that AP2 is not achieving the goal that all the Fund's unlisted real-estate companies/funds and half of the listed Swedish companies should report to GRESB.

GRESB gives each company/fund an overall score, GRESB score, which can be from 0 to 100. AP2's unlisted companies received a combined GRESB score of 74 (72). The unlisted companies' carbon footprint was 5 tCO₂e per SEK million invested, the previous year it was 7 tCO₂e per SEK million invested. See page 50 for the Fund's work with climate and carbon footprint reporting. In December 2017 AP2 arranged, for the second consecutive year, a sustainability day for its unlisted real-estate companies to increase the cooperation in sustainability issues between the companies and discuss sustainability indicators.

Timberland

Timberland is an asset class that provides both a diversified and stable, long-term return. AP2 has invested in forest since 2010. Of the Fund's total capital, 1.0 per cent is invested in timberland. The majority of the investments are in Australia and the United States and in forest assets that produce sawn timber and pulpwood. The Fund has three external managers: New Forests, Molpus and GreenWood Resources. New Forests invests in Australia and New Zealand, Molpus in the United States and GreenWood Resources in Europe, Latin America and the United States. The Fund's share of forest investments corresponded to approximately 113 000 hectares as at 30 September 2017.

AP2's holdings in timberland properties

	No. of hectares	Equity, %
Certified forest properties in accordance with FSC and/or PEFC	89 035	95
Forest properties in process of being certified in accordance with FSC and/or PEFC	3 937	4
Sustainably managed property in accordance with the FSC and/or PEFC, but in which the property cannot be certified	22	0
Other: Land which is occupied for example by roads, buildings and other non-production areas or land that has not yet been planted	1 111	1

The numbers in this table are as at 31 December 2016.

Requirements for sustainability certification

AP2 has a requirement that the managers, whenever possible, certify the forest properties in accordance with any of the international sustainability certificates Forest Stewardship Council (FSC) or Programme for Endorsement of Forest Certification (PEFC). Even if the property cannot be certified, it will be managed in accordance with these organisations' principles of certification.

New Forests started in 2005 and is a fund manager that specialises in forestry. They also work to find markets for the eco-system services the forest offers. Since the start, sustainability issues have been central in New Forests' business concept. New Forests has a declared ambition to be the leader in sustainability, which means that it has policies and management systems for its sustainability work and that the forest properties are certified for sustainability by an independent party. They are also working with various stakeholders in issues relating to the environment and social sustainability. AP2 has invested in three of New Forests' funds that focus on Australia and New Zealand. The species of tree are predominantly eucalyptus and pine. New Forests' sustainability report is available at www.newforests.com.au

Molpus has managed investments in forest properties in the United States since 1996 and has a long tradition of sustainable forestry. The forest properties in Molpus funds are a mixture of softwood and hardwood trees. The species of tree are predominantly oak, maple, poplar, spruce and pine. Molpus also has policies and management systems for its sustainability

work. They use the Sustainable Forest Initiative (SFI), which is the American certification program within PEFC. Since 2011, they have multisite certification, which means that an independent party performs an annual audit on about one third of the properties and that new properties are included as they are acquired. Molpus can also in some cases choose certification in accordance with FSC. The audit reports are available on SFI's website – www.sfiprogram.org

GreenWood Resources are responsible for the management of forest properties in two companies, Global Timber Resources and Lewis & Clark, which AP2 co-owns with other institutional investors. GreenWood was established in 1998 and manages forest properties in accordance with FSC and PEFC. They are heavily engaged in developing plant material with a focus on fast growing tree species such as poplar. Through Global Timber Resources, AP2 achieves diversification, both geographically (Brazil, Colombia, Poland and Uruguay) and towards more fast growing tree species. Lewis & Clark's forest properties are traditional forests located on the US west coast. More info at www.greenwoodresources.com

Provision for conservation purposes

AP2's forest properties also play a role in the conservation of wild animal and plant life. In the North West United States, in a mountainous area of forest rich in wildlife, a part of AP2's forest property have been permanently allocated for the conservation of wildlife and plant life, clean water and recreation. The area is of great importance for the grizzly bear and many other large mammals, which are dependent on the land bridge to allow them to roam between the mountain and forests. The conservation easement has been drawn up in partnership with Molpus, Idaho Department of Lands, Idaho Department of Fish and Game, The Nature Conservancy and U.S Forest Service and mean that the forest property can still be operated with sustainable forestry. At the same time, future division or commercial development of the land is prohibited.

The conservation easement also helps to maintain the local and regional economy for the surrounding communities, which are dependent on forestry for their livelihood. At the same time public access to the forest, animal habitats and good water quality are protected.

The forest's storage of carbon dioxide

Molpus also analyses whether the forest properties may be appropriate to be included in so-called carbon projects. If the expected re-growth is significantly higher than the clearing volumes, the value of the direct forest products relative to the value of the forest's carbon dioxide reduction (the forest lowers the carbon dioxide level naturally) is investigated. If the "carbon credits" that the forest then generates are to be sold, a functioning set of regulations and market are required. In the United States, there is Climate Action Reserve (CAR), which is a national programme that handles carbon credits. Molpus is actively working to develop projects for its forest properties in accordance with this program and carries out extensive work with measuring the amount of carbon dioxide that is stored in the forest properties. Molpus has currently implemented the programme for two of its forest properties.

The methods used to calculate how much carbon dioxide is stored are under development. New Forests has produced figures on the number of tonnes of carbon dioxide that is stored in the forests that it manages. AP2's portion of this carbon dioxide storage is about 6.0 million tonnes of CO₂e.

Farmland

Investing in farmland is part of AP2's work with diversifying the total portfolio. Approximately 2.4 per cent of the Fund's managed capital is invested in farmland. Sustainability issues are central to AP2's investments in farmland. The Fund's strategy is to

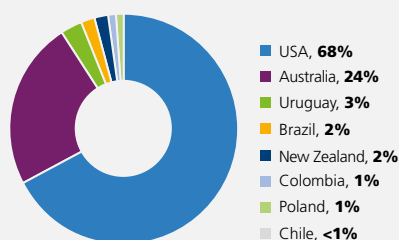
“ Sustainability issues are central for AP2's investments in farmland.

invest in large scale farmland in countries with clear legal structures. This means that many geographic regions are not suitable for investments.

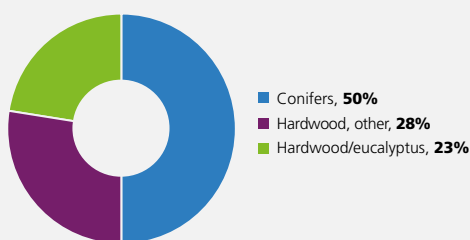
AP2 has elected to invest in farmland in the form of joint ventures with other investors, a form that suits the Fund's long-term approach to these investments. The Fund has invested in three jointly-owned companies as well as one fund: TIAA-CREF Global Agriculture (TCGA), TCGA II, Teays River Investments and TIAA European Farmland Fund (TEFF). TCGA and TCGA II own farmland in the United States, Brazil, Australia and Chile. AP2 has invested USD 450 million in TCGA and committed to invest USD 750 million in TCGA II, and USD 100 million in TEFF. The Fund has invested USD 100 million in Teays River Investments, which mainly invests in the USA.

AP2's shares of this farmland represented an area of approximately 145 000 hectares as at 30 September 2017.

Geographical breakdown of forest (hectares)



Production breakdown of forest (hectares)



TCGA, TCGA II and TEFF are managed by Nuveen, whose company Westchester is responsible for the operative management of farmland.

AP2 is actively working to improve the companies' work with regard to sustainability through board work, among other things. The Fund's representative on the board for TCGA is also a member of its ESG committee.

TCGA is working continually to increase transparency, among other things, for where the farmland is located geographically. More information at www.tiaa.org/public/assetmanagement/strategies/alternatives/agriculture

AP2 does not cultivate any land. The land is leased either to local farmers/companies or is managed by the external managers for the jointly-owned companies. When the farmland is leased out, it is the lessee (the farmer) who decides which crops will be grown and is also responsible for the production and sale of the harvested crops. If the farmland has permanent crops, such as fruit trees, the farmland will be managed by an operator appointed by the external manager. Most of the area owned by the jointly-owned companies is leased. The majority of the investments that Teays River has made are handled directly by the operating companies.

Reporting of PRI's guidance for responsible investments in farmland

In autumn 2014, PRI took over the responsibility for administering the principles of responsible farming that AP2 was involved in preparing in 2011. As a consequence of this, farmland principles

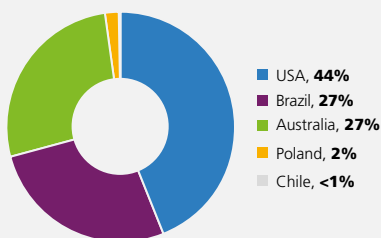
have been developed in the form of Guidance for Responsible Investment in Farmland.

PRI encourages all signatories that have invested in farmland to implement the guidance. As part of this integration, the reporting surrounding the implementation will not take place separately, but will be included in PRI's reporting tool.

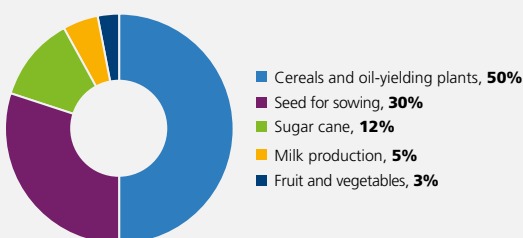
AP2 maintains a continuous dialogue with the managers and also visits the farmland a couple of times a year. Nuveen publishes a report annually, where it describes its implementation of the guidance for responsible investments in farmland. It has developed a number of indicators based on the guidance, which Teays River also uses in its reporting to AP2. Below is a summary of how the managers work with the guidance.

The first guideline concerns contributing to environmental sustainability by promoting measures such as reducing the risk of soil erosion and working for more efficient water management. The water issue is very central both environmentally and economically. Therefore, continuous investments are made to achieve a more efficient water management, for example, the construction of storage tanks and more effective irrigation methods. Achieving better control is one of the indicators in the environment, the proportion of agriculture that has detailed information on water use. In order to reduce the risks when using and storing pesticides and fertilisers, the portfolio managers are working to introduce programmes that will ensure good management of chemicals.

Geographical breakdown of agriculture (hectares)



Production breakdown of agriculture (hectares)



Before a farm property is acquired, an environmental assessment is always performed by an external party. The consultant performing the assessment also suggest, if necessary, measures to reduce the risk of environmental impact.

The second guideline relates to respecting the employees and human rights. As with environmental issues, the Fund's managers always make an assessment of the risks and impact. This is a part of the evaluation process prior to a property purchase. To reduce the risks for migrant workers and/or seasonal workers who mainly work with harvesting fruit and vegetables, Nuveen is working to implement third party verified programmes concerning the workers' health and safety.

The third guideline concerns the use of and ownership rights for land and other natural resources. These questions are particularly important in emerging countries, where there is not always a formal system for who has the right to use the land and who owns the land. Of the countries where AP2 has agricultural investments, it is only in Brazil where it can be complicated to determine who is the rightful owner of a property. That is why the manager in Brazil performs a detailed examination of who has owned the property's land from today's date back to the first time the land was sold by the government. This examination uses georeferences (GPS coordinates) and satellite imagery, among other things. The manager also has a dialogue with representatives of the local community and land owners.

Before a property is acquired in Brazil, the manager has ensured that the investment will not have a negative impact on the local environment and that there is no doubt regarding the ownership. Since 2000 it is a requirement in Brazil that all properties that are transferred have been registered with GPS coordinates.

The fourth guideline concerns business ethics. Managers and operators shall respect and implement processes that mean that all forms of corruption are counteracted. Laws must be followed even if they are weakly implemented. To combat corruption, the employees have received training in these issues. The managers require their employees to comply with laws and regulations and to work towards good business ethics. The majority of the managers and operators in the United States have received training in the American corruption legislation, the Foreign Corrupt Practices Act.

No legal offences or disputes were reported for farmland investments in the jointly-owned companies in the past year.

The fifth guideline concerns the reporting of activities in connection with the implementation of the guidelines. AP2 has chosen to include this report in the Fund's annual report.

It is now the fifth year that the Fund is reporting on its activities to implement the guidelines. Nuveen reports about how they implemented the guidelines are available on its [website](#).

Sustainability audits of farmland in Brazil

TIAA-CREF Global Agriculture (TCGA) leases out farmland in Brazil to Brazilian lessees and operators. In 2015, BSD Consulting, a global sustainability consultant, reviewed all TCGA's agricultural activities in Brazil with a focus on the activities' regulatory compliance regarding working conditions, health and safety at work, the environment and integrity. TCGA's ESG committee, in which AP2 is included, worked together with TCGA's manager in the implementation of the audits. The purpose of the audits was to assess compliance with laws and regulations in Brazil, with PRI's guidelines for responsible investment in farmland and/or commitment in relation to sustainability certification.

The auditors showed that a majority of TCGA's lessees have a good management system, but in all farmlands there were non-compliances and/or observations. In order to support the lessees, TCGA's manager has changed the visiting process so that it includes a more comprehensive review of the lessee's activities as well as a visit to their head offices, which is made even if it is not on land owned by TCGA. The manager has also created a detailed code of conduct for the lessees, which is shared and discussed in person with each lessee. A steering and supervisory review process in order to comply with the code of conduct is under development. TCGA's manager has also used what came to light during reviews to improve the control procedures for new acquisitions.

As part of the ongoing audit, the manager intends to carry out the next third party audit in 2018 for selected farmland activities in TCGA and for all agricultural activities in TCGA II.

For more information, see AP2's 2016 Sustainability Report and www.tiaa.org/public/assetmanagement/strategies/alternatives/agriculture

Sustainable investments

AP2 invests around SEK 17 billion in assets/managers with a business strategy that is primarily based on sustainability. In addition, the Fund has investments in Vasakronan, Cityhold Office Partnership, Castellum, Kungsleden, Fabega and Wihlborgs Fastigheter, all of which received a Green Star from the Global Real Estate Benchmark (GRESB) to a total value of SEK 19 billion. In total, this represents approximately 10 per cent of the Fund's total portfolio. A list of these investments is available on the Fund's [website](#).

Contribution to the UN's sustainability goals





AP2 invests around SEK 17 billion in assets/managers with a business strategy that is primarily based on sustainability.

Integration of human rights in the operations

In 2016 AP2 started work to implement the UN's Guiding Principles on Business and Human Rights. The purpose is to further develop the Fund's integration of human rights issues and increase the Fund's expertise in the issues. The working group consists of employees from different parts of AP2's operations and steering group of representatives from the Fund's executive management.

The UN's Guiding Principles on Business and Human Rights is a global standard that defines how governments and companies will prevent and reduce the adverse impact on human rights from companies. Business refers to companies and businesses in all sectors globally therefore investors are also covered by the principles.

An adverse impact occurs when a company or business acts so that the opportunity for people to enjoy their human rights is reduced. Some examples are the lack of working conditions, forced labour or activities that are harmful to human health.

According to the principles, a company has a responsibility to avoid causing, contributing or being directly linked to adverse impact and to act when this occurs. In order to be able to meet its responsibility, a company needs to have the following:

1. A policy commitment that will be incorporated in the culture.
2. Ongoing processes in place to identify, prevent and manage risks relating to violations of human rights. The business must also have a follow-up process and report its results.
3. A process that makes it possible to enable the remediation of any adverse impacts on human rights that the company has caused or contributed to.

AP2's human rights policy

AP2 took an important step in 2017 by establishing a policy for human rights. The policy was adopted by the Fund's Board and is the governing document for the work with human rights. The Fund has previously included the UN's guiding principles in its corporate governance policy, but by having a separate human rights policy, the Fund will clarify its responsibility in the issue.

The policy is an important tool for the promotion of the Fund's work and to communicate its commitment to stakeholders.

As the Fund's competence in the issues increases, the policy will be reviewed. In 2018, AP2 will work with implementing the policy in the organisation.

Identified risks within human rights

AP2 has been working to identify and assess the Fund's risks for any adverse impact on human rights. The work has been divided into three phases, where the risk of adverse impact that the Fund itself can cause (phase 1) was identified in 2016 and risks associated with the Fund's suppliers (phase 2) in 2017.

Risks that are directly linked to the Fund's holdings (phase 3) will be identified in 2018. The results from the risk identification will be presented in a final report after the three phases have been completed.

The process of risk identification

The process of risk identification is based on the risk to people rather than the risk to the Fund's activities. The Fund is looking, among other things, at risks associated with different sectors and countries. A severity assessment and a probability assessment of risks are made and a gap analysis is performed to visualise how the Fund manages its risks. The Fund will continue to further develop its processes to identify risks of adverse impact in 2018.

Cooperation with Shift

In 2017, AP2 started a partnership with Shift, which is the leading organisation in terms of knowledge of the UN's guiding principles. Shift has helped the Fund to identify risks in the supply chain and has helped in building up the Fund's expertise around how risk identification with a focus on human rights can be performed.

The collaboration with Shift has been especially valuable, as it is a first step in involving external stakeholders in the Fund's work. Actively having a stakeholder commitment with the stakeholders that are affected by the Fund's work is something that the Fund will develop further.

Creating internal commitment

Throughout the process, AP2 has worked with training in human rights and the Guiding Principles. Increasing competence within the organisation is essential for anchoring the work in activities and in order for the employees to incorporate the principles in their daily work.

Increasing competence has been achieved through internal seminars, conversations and training with Shift and through discussions with other businesses working with the issues. In 2018, the Fund will arrange internal mandatory training in human rights.

Positive in generating change

Human rights concern fundamental needs for people. Without such rights, it is difficult for people to enjoy the positive effects of development that take place in society. Respect for human rights is therefore closely related to the development taking place in a sustainable way, and an important part of being able to achieve the UN's sustainability goals. For a long-term investor such as AP2, sustainable development is important financially, socially and in environmental terms.

Contribution to the UN's sustainability goals



Overall picture of AP2's work with the principles

The UN's Guiding Principles on Business and Human Rights

AP2's activities

1. The company shall have a policy commitment that will be incorporated in the culture.

- In 2017, AP2's Board adopted a policy for human rights.
- The steering group for the work is composed of senior executives, which increases the anchoring to the management level.
- The Fund has arranged competence enhancing activities for employees to increase awareness and commitment. In 2016, the Fund held two internal seminars and a common training session for all employees. In 2017, the work group received basic training from Shift.
- To spread commitment, the Fund chose a cross-functional workgroup, so that employees from different departments would be involved in the work.

2. The company shall have processes in place to:

- identify and assess its adverse impact
- act to reduce its adverse impact
- follow up its results
- report results.

Identification and assessment:

- In 2016, the Fund analysed risks in its internal processes.
- In 2017, the Fund analysed risks associated with the Fund's suppliers.

Reporting:

- The Fund reports in the annual report how the work is progressing.

3. The company must have a process that makes it possible to make amends for adverse impact on human rights.

The Fund has not started work on this yet.

Climate

Climate is one of AP2's focus areas, which means that climate issues are, where relevant, integrated in the analysis and decision-making processes for all asset classes. The ambition is to develop the portfolio in line with the two degree target. In 2017, the Fund described and assessed its climate work based on a new voluntary international framework called TCFD. The Fund also works to reduce its direct impact on the climate through its in-house environmental programme.

The Fund's statement on climate change

AP2 is a long-term investor. In the analyses the Fund carries out to assess future pension payments, the Fund has a 30–40 year perspective. Therefore, it is natural to work with sustainability issues that are of great importance to social development. Climate is one such issue. Limiting global warming to two degrees Celsius, or preferably 1.5 degrees Celsius, which the world's countries agreed at the climate conference (COP21) in Paris in 2015, means a clear direction of travel towards a society without net emissions of greenhouse gases. This must be achieved some time after 2050.

AP2's climate ambition is to develop the portfolio in line with the two degree target. The initial focus in the Fund's climate efforts is both to reduce the financial climate risk and contribute to the transition. In December 2016, to describe why and how AP2 works with the climate issue, the Fund published its approach to the transition towards a [low-carbon economy](#).

Financial climate risks

Climate change is expected to have a major impact on the long-term return. Integrating climate aspects in risk assessments and investment decisions will become more and more important. Climate risks can be divided into two groups: transition risks and physical risks. Transition risks are divided into regulatory risks, technological risks, market and reputation risks. Physical risks are divided into acute and chronic risks.

The Fund has an internal working group on fossil energy and financial climate risks. Work has been underway since 2013 to analyse financial climate risks for fossil energy companies and coal-based electric power companies. A key part of this work is to assess whether the climate risks the companies face are priced by the market. AP2's work in analysing financial climate risks focuses on regulatory risks for companies within fossil energy and the electrical power sector. The Fund's work also involves analyses of technologies and markets for fossil energy.

The Fund started by establishing its position in terms of investments in fossil energy and analysing the financial climate risks for coal and energy companies. This analysis resulted in AP2 during 2014 deciding to no longer invest in a total of 20 energy companies, 12 of which were coal companies.

Approximately 40 per cent of the world's electricity production is based on coal, which is the most polluting type of energy, both from a climate and a health perspective. Emissions from coal-based electricity production represent approximately a third of global greenhouse gas emissions. This means that the sector is the focus of climate regulations around the world. Therefore, the next focus for the Fund was the utility sector, mainly companies that produce, transfer, distribute and/or sell electricity.

In 2017 follow-ups have been made to climate risk analyses for fossil energy companies and electrical power companies, which resulted in additional divestments from three fossil energy companies and four electrical power companies. One fossil energy company and three electrical power companies have been reintroduced to the Fund's benchmark index, because they no longer meet AP2's criteria for divesting companies in these sectors. In total, the Fund has divested from equities and corporate bonds in 79 companies as a result of financial climate risks.

To follow up the divestments' financial contributions, AP2 developed a method in 2017 to compare the return for MSCI World, excluding and including the divested companies. Of the 79 divested companies, 26 are included/have been included in the MSCI World index. The return contribution from the autumn of 2014 and up to 31 December 2017 after having excluded these companies from the index, has resulted in a positive contribution of 1.06 per cent. The divestments represented 2.1 per cent of MSCI World at the end of the year. A large proportion of the Fund's divested companies are Chinese, and companies in emerging markets, which are not included in MSCI World. In 2018, the Fund will develop methodologies for other indices.

Contribute to the transition

AP2 wants to be part of and contribute to the transition to a two degree society. The Fund will achieve this through:

- Investments in sustainable strategies.
- Dialogues with companies.
- Dialogues with decision-makers.

Additionally, several of the Fund's employees participate in seminars and conferences to present and discuss the Fund's progress with the climate issue, both in Sweden and internationally. AP2 participates as an advisor in two interdisciplinary research initiatives, CICERO Climate Finance and the Centre for Collective Action Research at Gothenburg University.

Investments in sustainable strategies

Creating a low-carbon society requires, among other things, the transformation of energy and transport systems. Several of the private equity funds that the AP2 invests in focus on companies whose products and services enable resource efficient solutions.

AP2's investments in green bonds and forest properties are two other examples of investments with sustainable strategies, that have a positive climate impact.

Dialogue with companies

AP2 supports Climate Action 100+, an international dialogue initiative that was launched in December 2017. Investors who are part of the initiative will for a five-year period cooperate on dialogues with about a hundred companies that represent the world's largest proportion of greenhouse gas emissions.

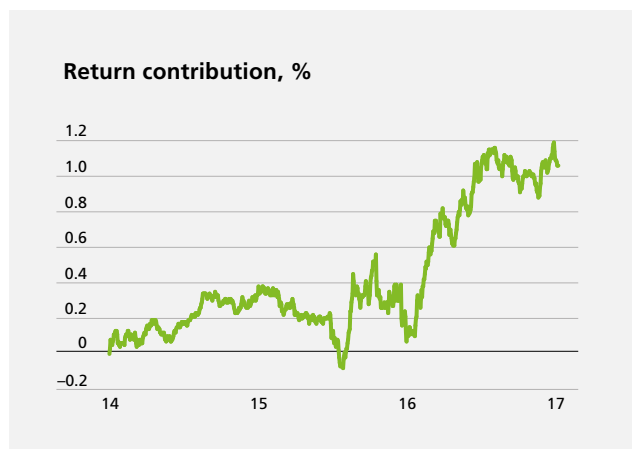
The aim is to encourage companies to take actions to reduce their emissions so that they align with the Paris Agreement, to report in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) and that the companies' boards take a clear responsibility for climate change risks. In January 2018, 225 investors had signed the initiative.

Dialogue with decision-makers

AP2 has been a member of the Institutional Investor Group on Climate Change (IIGCC) for many years. The organisation is working to make the investors' commitment to the climate issue clear for decision-makers and to submit the investors' requirements on policy commitments, which allow increased investments in climate-smart solutions. Among other things, IIGCC together with a number of other investor organisations published a document, the Global Investor Statement on Climate Change, which describes how investors can contribute and what expectations investors have for governments. More than 400 investors have got behind this document. In May 2017 AP2, together with approximately 200 global investors, encouraged governments in G7 and G20 countries to live up to the Paris Agreement, conduct rapid implementation and express their continued support for this work.

Carbon footprint

AP2 is positive to measuring and reporting investments' climate emissions, as part of its broader climate programme. Carbon footprints provide important information but there are limitations, see table on page 53.



“ AP2 supports Climate Action 100+, an international dialogue initiative that was launched in December 2017.

Since 2015, the AP Funds have had a working committee with representatives from each AP Fund to coordinate the funds' reporting of carbon footprints. In autumn 2015, AP2, together with the other AP Funds, presented a coordinated way to report the carbon footprint. The three indicators that were then selected for the carbon footprint for listed equities were all calculated based on the AP Funds' ownership share in the companies.

In December 2015, the Financial Stability Board appointed a committee, the Task force on Climate-related Financial Disclosure (TCFD), to produce recommendations for climate reporting. TCFD presented the recommendations in June 2017. They are optional and apply for both companies and investors. The framework is divided into four areas: governance, strategy, risk management and metrics and targets. In TCFD's framework, it is recommended that investors report their carbon footprints with the indicator 'carbon dioxide intensity, weighted average'. In this metric, the carbon footprint is calculated by multiplying the companies' share of the portfolio (based on market value) with the companies' carbon dioxide intensity in relation to revenue and then add these together. In this metric, the ownership share is not important. In order to be in line with TCFD, the AP Funds also decided to include this indicator (no. 4 below) in the funds' reporting.

All AP Funds report the carbon footprint for the equity portfolio with the following indicators:

1. The absolute carbon footprint for the equity portfolio corresponding to the Fund's share of the companies' total emissions (tCO₂e million).

2. Carbon dioxide intensity, where the absolute carbon footprint is related to the Fund's ownership share in the companies' market value (tCO₂e/SEK million).
3. Carbon dioxide intensity, where the absolute carbon footprint is related to the Fund's ownership share of the companies' revenue (tCO₂e/SEK million).
4. Carbon dioxide intensity, weighted average, where the companies' carbon dioxide intensity in relation to revenue is multiplied with the companies' share of the portfolio based on market value (tCO₂e/SEK million).

The AP Funds' carbon footprint is calculated for holdings as at 31 December 2017 with the help of the last available carbon dioxide data for direct emissions (Scope 1) and indirect emissions from energy (Scope 2). No correction is made for double counting of emissions. Double counting means that emissions are counted twice, for example, emissions from power companies are sometimes counted twice: as a direct emission for the power company and as an indirect emission for companies that buy electricity.

Because of the AP Funds' different investment strategies and allocations to various financial assets, the carbon footprints for the Funds' investments vary in size. The differences are further enhanced by the underlying company information which must sometimes be adjusted, supplemented or estimated, which means that the selection of supplier for the calculations of carbon footprints affects the result to a certain extent. This means that the carbon footprint between the AP Funds is not fully comparable.

AP2's carbon footprint for listed equities

	2017	2016	2015	2014
The equity portfolio's absolute emissions of greenhouse gases (Scope 1 and 2) (tCO ₂ e million) ¹	2.6	2.7	3.4	3.6
Carbon dioxide intensity related to the ownership share of the companies' market value (tCO ₂ e/SEK million) ²	18	20	25	28
Carbon dioxide intensity related to the ownership share of the companies' revenue (tCO ₂ e/SEK million) ³	28	24	29	31
Carbon dioxide intensity, weighted average (tCO ₂ e/SEK million) ⁴	24			
The market value of the Fund's portfolio covered by CO ₂ e data (SEK billion, 31/12/2017)	142.4	135.4	148.5	127.6
Proportion of the share capital for which there is data (%)	92	97	98	93

¹ CO₂e (carbon dioxide equivalent) is a unit of measurement that makes it possible to compare the climate impact from various greenhouse gases.

² The sum of the Fund's share of the companies' emissions divided by the sum of the Fund's share of the companies' revenue.

³ The sum of the Fund's share of the companies' emissions divided by the total market value of the Fund's listed shareholdings.

⁴ The sum of the companies' share of the portfolio (based on market value) multiplied by the companies' carbon dioxide intensity in relation to revenue.

The formulae for the above indicators are available on the Fund's [website](#).
Source: MSCI ESG Research/AP2.

In 2017 the working committee assessed a number of different data providers' services associated with carbon dioxide indicators for different asset classes, and noted there is still development taking place within this area. During the year, several of the AP Funds have taken part in discussions with international investors about carbon footprints. In these discussions, a consensus has been reached concerning the limitations that carbon footprints have as metrics, due to lack of data and methodology and due to that the metric only captures some aspects concerning climate risks in the funds' portfolios. The AP Funds have therefore chosen to wait for coordination concerning more asset classes.

The listed portfolio's carbon footprint

As early as 2009, the Second AP Fund conducted an extensive project to analyse its listed portfolio's carbon footprint. By gathering data from all the companies in the portfolio, based on its holdings in each company, it was possible to calculate the total carbon emissions generated by its combined holdings. For the Fund this analysis contributed to a more profound understanding of the cost of carbon emissions. If companies are forced to pay for their emissions, this will impact on their profits and cash flow. The market value of these companies will be affected by the impact such costs may have on future profits. This is why it is important that companies report their carbon emissions.

For 2017 the Fund is reporting the listed equity portfolio's carbon footprint in accordance with the indicators that the AP Funds have agreed on. The companies' total carbon dioxide emissions for

the equities are attributable in these indicators. No breakdown of the emissions is made between the companies' equities and bonds. The analysis is based on data from MSCI ESG Research. For AP2's carbon footprint, data is available for 92 per cent of the share capital, of which 68 per cent is reported and 32 per cent estimated. This carbon footprint is calculated for listed equities that amount to approximately 44 per cent of the Fund's total capital.

The absolute carbon footprint for AP2's total equity portfolio for 2017 is 2.6 million tCO₂e. If the footprint is related to the Fund's ownership share of the companies' market value, the carbon dioxide intensity will be 18 tCO₂e/SEK million, which can be compared with the intensity in 2016 which was 20 tCO₂e/SEK million. If the footprint is instead related to the ownership share of the companies' revenue, the carbon dioxide intensity will be 28 tCO₂e/SEK million, which can be compared with the intensity in 2016 which was 24 tCO₂e/SEK million. The fact that the proportion of the share capital for which there is data has decreased, is due to increased allocation to Chinese equities, which MSCI currently has limited coverage for. Since the Chinese equities will enter MSCI's index in 2018, the coverage will be improved for next year.

Carbon footprints for other asset classes

AP2's ambition is eventually to be able to present a carbon footprint that includes all asset classes. For 2017, the Fund has calculated the carbon footprint from listed equities, timberland and traditional real-estate. This means that 53 (62) per cent of AP2's fund capital is measured according to a carbon dioxide indicator.

The carbon footprint's benefits and limitations

The carbon footprint's benefits	The carbon footprint's limitations
Provides a basis to evaluate certain climate-related financial risks such as a price for carbon dioxide.	Does not measure the investments' total climate impact because: <ul style="list-style-type: none"> – Only certain emissions are included – Emissions data from companies are not complete – Only certain types of asset classes are measured – Savings on emissions through products and services are not calculated – Information on fossil reserves is not included.
Can constitute a basis for company intervention such as requirements on emission reduction goals, risk management, business strategies and transparency.	Does not measure a portfolio's total climate risks, such as physical risks in the event of extreme weather, floods and droughts, or, for example, consequences of increasing legislation on energy efficiency. Carbon footprints are not a measure of a portfolio's total climate options or how well a portfolio is positioned against a transition to a low-carbon society.
Improves the AP Funds' transparency and affects the business sector for increased transparency and data quality.	Does not measure what is required to achieve the two degree target and provides no guidance on how investors may contribute to achieving it. A unilateral focus on individual portfolios' reduced carbon footprints therefore risks drawing attention from actual emission reductions and how investors can provide solutions for a low carbon dioxide economy.

For 2017, the Fund has not calculated the absolute carbon footprint from corporate bonds because the Fund changed the system in which the carbon footprint is calculated.

AP2's non-listed property portfolio is 5 (7) tCO₂e/SEK million based on market value.

The Fund has a dialogue with managers of forest properties on the calculation of carbon dioxide storage and carbon dioxide emissions. One of the Fund's managers, New Forests, has calculated the total carbon dioxide storage that is stored in their forests. AP2's proportion of this is approximately 6.0 million tCO₂e. However, this is a figure of how much carbon dioxide is stored in trees, not the amount of carbon dioxide they have taken up in a year.

In 2016, the Fund performed a sector analysis of the private equity investments' carbon footprint by using carbon dioxide data from listed companies in different sectors and geographies, since data for non-listed companies is very limited. The analysis showed that the carbon dioxide heavy countries and sectors are not over-represented. The carbon footprint is in line with MSCI World.

Reporting in accordance with TCFD

In June 2017, the Task Force on Climate-related Financial Disclosures (TCFD) presented its recommendations on reporting of climate-related information. The recommendations are aimed at both companies and investors. AP2 supports the recommendations and has started the implementation.

A report in accordance with TCFD's framework provides information on: 1) how the climate issue is handled by the organisation's **governing** body (the board of directors and management team), 2) what the organisation's **strategy** is on climate change and the transition to a low-carbon society, 3) the organisation's **climate risks** and opportunities and 4) which **metrics and targets** the organisation is using.

In autumn 2017, the focus has been on developing information retrieval and describing AP2's ongoing climate work in

accordance with TCFD's framework. A report in accordance with the framework is available on the [website](#).

In-house environmental programme

AP2 is working in a variety of ways to raise awareness of and minimise the environmental impact in its own activities. It has therefore been a natural step to introduce an in-house environmental management system based on the City of Gothenburg's environmental diploma. The first diploma was awarded in January 2009 and the Fund has been awarded it again each year. The system has the same basic concepts as the ISO 14001 and EMAS systems, but is better adapted to smaller organisations.

The in-house environmental audit shows that the greatest environmental impact from AP2's office comes from the electrical energy use and the carbon dioxide emissions in connection with travel. In-house goals have been set up based on the Fund's environment policy. A special environmental group drives the Fund's own environmental work and environmental training is carried out continuously for all employees. Since 2015, AP2 has a green lease agreement with the landlord Hufvudstaden. An action plan has been produced to reduce the premises' environmental impact, among other things, by only using green electricity and implementing measures in order to reduce energy consumption and improve waste management.

In 2017 the property owner built a bike room and improved the waste management in the property, which means that AP2 can now also separate compost waste at source.

Contribution to the UN's sustainability goals



Environmental data

	2017	2016	2015
Internal environmental indicators			
Electricity, kWh	135 000	130 000	127 500
Renewable electricity, %	100	100	100
Copying paper, purchased (A4), kg	350	755	820
Number of printouts	159 000	228 000	249 500
Business travel			
Proportion of train journeys between Gothenburg and Stockholm, %	91	84	85
Emissions of greenhouse gases from:			
Rail travel, domestic, tonnes of CO ₂ e	0	0	0
Air travel, domestic, tonnes of CO ₂ e	5	9	8
Air travel, abroad, tonnes of CO ₂ e	172	199	171



In autumn 2017 the focus has been on developing information retrieval and describing AP2's ongoing climate work in accordance with TCFD's framework.

Corporate governance

The general meeting is the most important forum for shareholders to exercise their influence. To be able to exercise your right as a shareholder to vote at the meeting is one of the most important opportunities to influence a company. Therefore, AP2 is active in both Swedish and foreign general meetings.

A large part of AP2's capital is invested in equities in Swedish and foreign companies, and the Fund is therefore a significant shareholder. The Fund is also non-political and independent, both in terms of ownership sphere and in its unique position among Swedish authorities, which means that the Fund has the ability to act as a committed and long-term owner.

The shareholders' commitment and interest in the companies' long-term development is an important prerequisite for better growth in value. As a long-term owner, AP2 has a very important function to play on the global financial markets. The Fund is therefore actively working with issues that relate to professional corporate governance, good ethics and environmental considerations and to developing good practice in fund management issues.

AP2's activities towards listed companies include an active participation in Swedish and foreign general meetings and a dialogue with boards and management teams in the Fund's portfolio companies.

AP2 is also working for good corporate governance by cooperating with other owners on issues of principle character and is actively contributing to the development of policies, regulations and standards.

Corporate governance in Swedish companies

Swedish general meetings

The Fund has shareholdings in approximately 140 Swedish companies. For practical reasons, the Fund has determined that it is not possible to attend and vote in all general meetings in the Swedish portfolio. The selection of companies, where the Fund is present at the meeting, is based on a number of criteria:

- Companies that are among the Fund's 20 largest holdings.
- Companies where the Fund's voting rights are above one per cent.
- Companies where the Fund is among the ten largest owners.
- Companies with controversial items on the agenda.

Overall, AP2 voted in 51 general meetings in Swedish listed companies in 2017.

During 2018, the Funds plans to vote in many more Swedish general meetings than before. After the end of the period, the Fund will assess this and then decide on the future strategy. AP2 and other institutional owners have for many years held a good and constructive dialogue with the Swedish listed companies, concerning many of the issues dealt with at the general meetings, among other things.

In June 2017, AP2 published its first separate meeting report for Swedish companies. The reason for this was that the Fund previously published its sustainability report in September/October, but this report is now being published at the same time as the annual report. Therefore, the Fund will continue to publish a general meeting report in June. [Read the report](#) in its entirety on the Fund's website.

Nomination committees

AP2 takes a positive view of being represented in company nomination committees, because this represents an important opportunity to exercise owner influence. The Fund's policy is to accept any request for nomination committee assignments. The Fund's ownership group makes decisions about who should represent the Fund, based on who is best suited for the assignment.

Since the nomination committees often consist of the three to five largest shareholders in a company, AP2's nomination committee assignments vary depending on the Fund's holding in the companies. Before the 2017 general meeting season, the Fund was represented on the nomination committee of Opus Group, as chair, and of Castellum, Coor Service Management, IAR Systems, Kindred (Unibet), Kungsleden, Midsona, Resurs Holding and Swedish Match. Before the 2018 general meeting season, AP2 is represented on the nomination committee of Opus Group and IAR Systems, as chair, and of Coor Service Management, Kindred (Unibet), Kungsleden, Midsona and Resurs Holding.

Issues in focus

During the year, AP2 had a continued focus on remuneration issues and a number of dialogues were held with boards concerning the formulation of incentive schemes in order to achieve improvements. The Fund has for many years emphasised the importance of a greater share of women on listed companies' boards, which is taken into account in particular when the Fund is involved in the nomination work. The Fund also believes that the nomination committees should establish a specific long-term plan for the work in achieving a good board composition relating to gender, age, background, experience and expertise, among other things.

Diversity

During the year, AP2 focused in particular on diversity and, above all, the proportion of women on boards. This was followed up for each company whose general meeting the Fund intended to attend. The Fund's Kvinnoindex (Women's Index) for 2017 shows that the proportion of women on boards now totals 32.2 per cent. Read more about the Fund's [Kvinnoindex](#) on the Fund's website.

Individual elections

In 2016 AP2 sent letters to the boards and nomination committees in the companies whose annual general meetings the Fund had the intention of attending. In the letters, the Fund encouraged the companies with large foreign ownership to review how they formulate their notices to attend the meetings in terms of choice of board members. Swedish companies have usually proposed and made decisions on the election of board members as

“ During the year, AP2 focused in particular on diversity and, above all, the proportion of women on boards.

a unit – all members are elected with a single decision. This is not unusual, because Swedish companies are used to regarding the Board as jointly responsible. However, in the Swedish Companies Act it is clearly stated that the board members shall be selected individually and not as a collective, regardless of how the decision is formulated.

In conjunction with the Swedish Corporate Governance Board revising the Swedish Corporate Governance Code, a discussion was held concerning how the selection of board members should be performed. A large number of foreign shareholders had written to the Board and pointed out that in Sweden the common model in practice makes it very difficult for them to vote against a proposal regarding an individual board member. This is because the agenda is designed so that the election of the board takes place by one decision, which means that even the voting instructions that foreign owners normally apply are designed so that the election of the board takes place as a group. The consequence of this will also be that if, for example, during the meeting alternative boards proposals are presented, and voting takes place individually instead, the foreign owners' votes will be invalidated.

Nomination committees where AP2 participated prior to the annual general meetings 2017

Company	Proportion of women on the Board, %	Number of newly elected women	Total change cf. with previous year
Castellum	57	0	0
Coor Service Management	43	0	0
IAR Systems	40	1	1
Kindred	14	0	0
Kungsleden	71	1	1
Midsona	43	0	0
Opus Group	50	1	0
Resurs Holding	25	0	0
Swedish Match	43	1	0

AP2 wants all shareholders' votes to be counted and therefore the Fund encouraged companies with a large foreign ownership to allow for these owners to elect the board members individually. A number of companies designed their notices to attend meetings in accordance with the Fund's requirements. In 2017, the Fund could state that several companies now both formulate their notices and make decisions in meetings so that the election of board members is made individually.

Statement of approach to the UN's Sustainable Development Goals

Another focus has been the companies' approach to the UN's 17 global goals for sustainable development. In a letter which was sent in autumn 2016 to the chairs of the board for approximately 40 Swedish companies, AP2 encouraged companies to relate their activities to the UN's 17 global goals for sustainable development and report on their approach to the goals by no later than the 2017 general meeting. The Fund has followed this up in a dialogue with the companies, both before and at the meetings.

Companies that the Fund has noted in particular for their work with the sustainability goals are SEB and Trelleborg, which are both excellent examples of how they have incorporated the goals into their activities and clearly presented this in the annual report and the sustainability report, among others.

Companies where the Fund did not find any form of reporting on the work with the sustainability goals, and therefore asked for a report at the general meeting, were Swedbank and Garo, among others.

Incentive schemes

Several companies forwarded proposals at the meetings for incentive programmes that either contained match equities or were in other ways subsidised without requirements on specific goal-determined performance. AP2 expressed its view on this at these companies' general meetings. It is stated in the Fund's ownership policy that "AP2 thinks that so called match equities shall be linked to clear goals (performance). AP2 does not consider continued employment and own investment to be a performance which in itself confers entitlement to match equities. If match equities are not performance based, this should be justified in particular." The Fund believe it is unfortunate when incentive schemes contain match equities without performance and that are not particularly justified in the documents.

However, the Fund voted for the proposals in these companies in 2017, but will not support future schemes with the same design.

During the autumn, the Fund wrote letters to the companies whose incentive schemes the Fund had views on, and reminded them about the Fund's position.

Board and shareholder proposals that AP2 voted for in 2017 in foreign companies, number of

Area	Board proposal	Shareholder proposal
Auditors, financial reporting, formalities, etc.	1 062	0
Board of Directors	7 395	13
Remuneration issues	1 365	37
Capital structure	360	2
Group structure, agreements, acquisitions etc.	91	0
Shareholders' rights/governance	71	272
Sustainability	0	85
Other	0	15
Total	10 344	424

Voting in foreign general meetings 2017

	No.
Number of meetings	769
Agenda items	10 768

Corporate governance in foreign companies

Foreign general meetings

In order to improve corporate governance in foreign holdings, the Fund has, together with the First, Third and Fourth AP Fund, had a common electronic voting platform based on the funds' ownership policies since 2008. Most issues are handled automatically via the voting platform but certain issues such as remuneration matters, are sent to the funds for manual assessment. Each Fund will make its own decision on how to vote.

In foreign markets, the Fund primarily votes in companies in the following eleven countries: Australia, France, Italy, Japan, Canada, the Netherlands, Switzerland, Spain, United Kingdom, Germany and the United States. It is primarily the MSCI world equity index that forms the basis of the selection criteria for which companies the Fund votes in. There are also other criteria, such as that the Fund has a dialogue with the company concerning any issue and/or that the Fund has submitted a shareholder proposal to the meeting. In 2017 AP2 voted in 769 foreign general meetings. The Fund uses an external party for the practical voting procedure and votes in writing (proxy voting) with the help of the electronic voting platform.

Every month, the Fund produces a detailed report on its website on how the Fund voted in the foreign companies. Read more about how the AP2 voted in different companies on the [website](#).

Letter to foreign companies

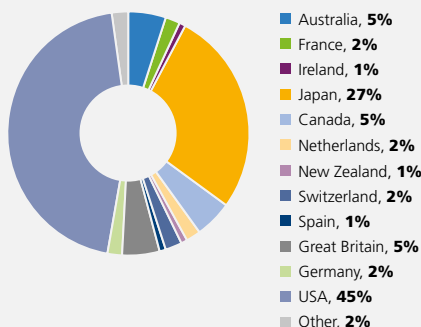
Together with other international investors, the Fund was involved in a number of ownership dialogues with companies during the period. In order to further improve communication with the Fund's foreign portfolio companies, AP2 writes letters each year to approximately 50 companies and explains how the Fund regards dedicated ownership and the importance of exercising the right to vote. In these letters the Fund also explains the background as to why it has not supported the boards' recommendations on certain points. The letters have resulted in additional contact with the companies by letter, but also via telephone meetings.

Collaboration with other investors

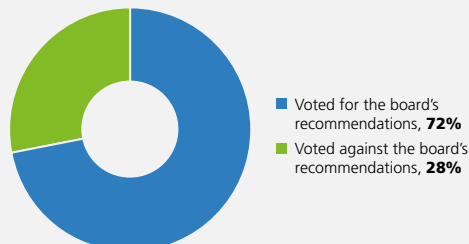
In addition to the collaboration between the AP Funds in the Council on Ethics, AP2 is a member of and supports various Swedish and international initiatives in the environment, ethics and corporate governance.

The Fund also cooperates with other investors to influence new legislation, primarily within corporate governance. These collaborations are becoming increasingly important to be able to influence and make changes and thereby improve the shareholder value in the long-term. Read more about AP2's memberships and initiatives on the [website](#).

Voting per market, 2017, %



Voting in foreign companies 2017, %



Diversity and transparency

Diversity, and primarily increasing the proportion of women on boards and in company management, was one of the first ownership issues that the Fund started working with. Since then, AP2 has been working to contribute to positive development, including through dialogue with companies regarding selection processes for corporate boards and executive management teams. Spreading knowledge, for example, through the Fund's annual Kvinnoindex (Women's Index), has been another way.

Kvinnoindex

For 15 years, the Fund has measured the proportion of women on boards and managements and annually produces a report about this, AP2's Kvinnoindex. The information from Kvinnoindex is used in the Fund's corporate governance work. The ambition of Kvinnoindex is to contribute to an objective debate about how the proportion of women on the boards of Swedish listed companies can increase, as well as the diversity of boards and managements when it comes to age, background, experience and expertise. This is because the Fund believes that a wider recruiting basis increases the opportunity to create better boards and managements, which in turn can lead to more successful companies.

The index from 2017 shows that the proportion of women represented on company boards now amounts to 32.2 per cent and the proportion of women in executive positions amounts to 21.7 per cent. The proportion of newly elected female board members was 41.9 per cent. The development in recent years shows that it is obvious that these companies, without legislation, are themselves on the way to achieving equality on their boards and executive management. This shows that nomination committees have become better at utilising the entire breadth of expertise and that the rate of this change process is accelerating.

Diversity as part of the quantitative model

ESG factors have been integrated in AP2's quantitative management model for global equities since 2016. One of these factors is the proportion of women in senior positions. One observation that the Fund made is that companies with a high proportion of women in senior positions also show a better development, regardless of the size or type of the company. An explanation for this could be that these companies have a greater focus on issues related to values and corporate culture, which is reflected

in the Fund's measurable indicators such as the proportion of women in senior positions.

During the year, the Fund developed two multi-factor indices that integrate the exposure of several different risk factors in the same index. A central part of these new indices is that they integrate factors related to ESG directly in the strategic choice of index. One of these factors is equality. Read more about multi-factor indices on page 22.

Read more about AP2's internal work with diversity on page 19.

Transparency

It is of fundamental importance for a properly functioning financial market that the information for owners and other stakeholders is good. It is through transparency and openness that investors can build up a relevant understanding of the companies' situation and therefore also a basis to ensure the assessment of the value is as correct as possible.

In line with the EU Directive, AP2 also believes that the companies must report information on environmental, social and personnel-related issues, as well as issues concerning human rights and bribery in their annual financial statements. Through transparency and reporting, investors can gain a better understanding of the risk and profit profile for each company.

For several years, AP2 has taken the initiative and supported different projects, whose purpose is to improve transparency and reporting. Examples of such initiatives are EITI (Extractive Industries Transparency Initiative), CDP and PRI's guidelines for responsible investment in farmland.

The Fund also has, together with the private equity industry in several countries, been part of and produced a framework that investors can use in their requirements for reporting. AP2 has included these issues in its assessments of private equity funds.

AP2's reporting

The Fund believes that it is important to report on its activities and its sustainability work in an open and comprehensible manner. 2017 is the first year that AP2 is choosing not to publish a separate sustainability and corporate governance report but instead, this is part of the activity section in the annual report. Sustainability is now well integrated in the Fund's activities and that is why this is a natural step to take. More information is available on the Fund's [website](#).

More detailed information about the Council on Ethics' work is available in its annual report. More information about how the Fund is working with PRI's principles is available in the annual survey that PRI is conducting. AP2's responses are available both on the [Fund's](#) and PRI's websites.

GRI reporting

The sustainability reporting in this annual report has been prepared according to GRI Standards, Core level. The Fund's GRI index, which is available on the [website](#), provides an overview of the general information according to GRI's guidelines and information for the areas AP2 has chosen to report based on the materiality analysis. Read more on pages 34–35.

“2017 is the first year that AP2 is choosing not to publish a separate sustainability and corporate governance report but instead, this is part of the activity section in the annual report.”

Contribution to the UN's sustainability goals





For several years, AP2 has taken the initiative and supported different projects, whose purpose is to improve transparency and reporting.

Result and performance 2017

As of 31 December 2017, the Fund capital totalled SEK 345.9 billion. Profit for the year of SEK 28.8 billion is the result of a positive return from all equity markets, with the greatest contribution from the Fund's investments in global equities. During the year, the net outflow from AP2 to the national pension system amounted to SEK 7.4 billion.

Fund capital is affected by two factors, the profit/loss for the year and the net flows within the pension system. In 2017, the Fund capital increased by a net of SEK 21 409 (23 898) million, deriving from the positive result of SEK 28 784 (30 535) million, however net outflows to the pension system were charged in an amount of SEK –7 375 (–6 637) million. Capital flows consisted partly of contribution payments and pension disbursements,

amounting to a net of SEK –7 149 (–6 421) million, and partly of the cost of administering the pension system, which was charged against Fund capital in an amount of SEK –226 (–216) million. For the ninth consecutive year, the net flow from the AP Funds to the pension system was negative. Accordingly, AP2 therefore has in total, in the last nine years, paid out approx. SEK 44 billion to cover the ongoing shortfall in the pension system.

Fund capital performance 2017, SEK million

	2017	2016
Fund capital at beginning of year	324 522	300 624
Pension contributions received	66 850	64 174
Pension disbursements	–73 999	–70 595
Administration contribution	–226	–216
Net result for the year	28 784	30 535
Closing Fund capital	345 931	324 522

Composition of strategic portfolio, exposure and return as per 31 December 2017 and 31 December 2016

Asset class	Strategic portfolio, %		Exposure, %		Exposed value, SEK billion		Absolute return, %		Relative return, %		Active risk ex post*, %	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Swedish equities	9.5	10.0	9.1	10.0	31.4	32.6	11.3	9.1	0.5	–1.0	1.7	2.0
Equities, developed markets	22.0	22.5	22.2	22.1	76.7	71.8	10.7	16.9	0.7	0.5	0.4	0.4
Equities, emerging markets	11.0	11.0	11.1	10.5	38.4	34.2	20.6	18.9	–0.5	–0.6	0.6	0.8
Swedish fixed-income securities	12.0	13.0	11.8	12.7	41.3	41.0	0.6	2.2	0.2	–0.3	0.3	0.3
Foreign government bonds	4.0	4.0	4.0	3.8	13.8	12.4	–2.3	8.3	–0.1	0.4	0.6	0.6
Foreign credits	10.5	10.5	10.4	10.0	35.8	32.6	–1.7	12.3	–0.2	0.1	0.2	0.3
Global green bonds	1.0	1.0	1.0	1.0	3.4	3.1	–0.6	5.6	–0.6	–0.8	0.4	–
Fixed-income securities, emerging markets	6.0	6.0	6.1	5.9	21.1	19.0	3.5	17.8	0.1	–0.4	0.4	0.3
Total listed assets, excluding alternative investments, commission fees and operating expenses**	76.0	78.0	75.7	76.0	261.9	246.7	9.0	9.6	0.1	–0.4	0.4	0.4
Alternative investments**	24.0	22.0	24.3	24.0	84.0	77.8	9.5	13.5				
Total Fund capital, excluding fees and operating expenses**	100.0	100.0	100.0	100.0	345.9	324.5	9.1	10.5				

* Historical outcome, 12 months rolling.

** Including FX hedging.

Net result for the year

The profit for 2017 amounted to SEK 28.8 billion and primarily mirrors a strong stock market trend in both emerging markets and other equity markets. The Fund's investments have a total return of 9.1 per cent.

Operating income

Operating income consists of both direct return and net results per asset class and foreign-exchange gains/losses excluding commission fees. Direct return in the form of net interest income and dividends received, totalled SEK 7 031 (8 250) million for the year. The net result for listed equities comprises both unrealised and realised gains/losses, and totalled SEK 22 967 (8 139) million, including expenses for performance-based fees but excluding foreign-exchange effects. The result is a consequence of the good return in all equity markets, where emerging markets reported the highest return percentage in 2017. The Fund's Swedish equity portfolio generated a total return of 11.3 per cent, compared with a return of 10.7 per cent for the foreign equity portfolio in developed markets and in emerging markets, 20.6 per cent.

The net result for non-listed equities totalled SEK 4 283 (3 923) million, and is primarily attributable to the increase in value and the results in the property portfolio and results from underlying investments in private equity funds. The net result for fixed-income securities amounted to SEK 1 249 (2 179) million, a result that reflects the interest rate market's lower return in 2017 compared with 2016. Fixed-income securities in the Swedish market and emerging markets have had a positive return, while the other asset classes in the fixed-income portfolio showed negative results.

The Fund's trade in derivatives posted a positive net result of SEK 224 (–162) million, this positive result derived from the Fund's ongoing work with maintaining the correct exposure level.

The Fund's exposure in foreign exchange (FX) had a negative impact on the reported net result for foreign exchange assets. The Fund's ongoing hedging of parts of the portfolio in foreign currency during the year has had a positive effect on the net result. The reported net of foreign-exchange gains/losses, where the exchange loss on foreign holdings, SEK –14 614 million, and the positive impact of currency hedging, SEK 8 143 million, are reported together, amounted to SEK –6 471 (8 687) million. More details of the Fund's FX exposure on page 80.

Management costs in the form of performance-based fees, totalling SEK 215 (139) million for 2017, have been charged against the net result for externally managed assets. This cost arises when an external portfolio manager generates a return over and above the agreed target, which has a direct impact on the net result

reported for each asset class, as per current accounting principles. Commission expenses pertaining to fixed external management fees of SEK 241 (225) million, as well as custodial expenses of SEK 40 (39) million, were charged against operating income.

Fund's total expenses

The Fund's total expenses include in-house expenses in the form of operating expenses, fixed external portfolio management and custodial charges. Variable expenses related to performance based contracts and management fee payments reported as part of the acquisition value are charged against the net result for each asset class, as described in Notes 3 and 4 on page 88. The Fund's operating expenses and commission expenses, expressed as an expense ratio was unchanged and amounted to 0.15 (0.15) per cent for 2017.

The level of costs is a direct effect of the Fund's investment strategy, according to which external managers are entrusted for asset classes and markets that are believed to offer the prospect of solid returns and for which the Fund lacks the necessary in-house resources. The Fund's focus on internalisation in the last few years, which has meant that SEK 50 billion of the managed capital has been transferred from external to in-house management, had the desired effect on the cost level in 2016. The management cost percentage of the Fund's total costs for 2017 was therefore still at a level which, apart from 2007, is the lowest since the start. This is despite the fact that the portfolio over the years has become increasingly complex with different asset classes in a growing number of markets throughout the world. Internalisation has therefore enabled increased diversification up to the current strategic portfolio.

A global comparison of cost efficiency with other pension funds indicates that AP2 has a high cost efficiency, which is commented on further on page 81.

Operating expenses

Operating expenses totalled SEK 218 (217) million. Reported as a ratio of average fund capital over the year, this corresponds to a lower cost level (expense ratio excluding commission fees) of 0.06 (0.07) per cent.

External management costs

Management costs are to a large extent determined by the volume of Fund capital, the percentage of assets under external management and the degree of active risk adopted, as well as the asset class selected. During 2017, the approach adopted for Fund capital under external management was mainly active and, by year-end, SEK 58 (57) billion was being managed under external mandates,

including non-listed assets. This corresponds to 17 (17) per cent of the Fund's entire capital.

The cost for the external management of market-listed assets partly comprises a fixed element and, for certain assignments, a performance-based element. In 2017, the fixed cost amounted to SEK 238 (219) million and the variable performance-based element to SEK 215 (139) million. If the management fees for unlisted funds are included, the combined fixed cost for external management of the Fund's assets was SEK 241 (225) million. The increase in external fixed management fees expressed in SEK is an effect of the year's assets growth and increased allocation to Chinese A-shares. However, in relation to the managed assets, the commission expenses are relatively unchanged at the level achieved by the internalisation process during 2012–2015. Furthermore, the fact that the AP Funds have been liable to pay VAT on foreign acquisitions since 2012 has also increased costs. As the AP Funds are not entitled to reclaim VAT payments, this VAT registration requirement constitutes an increase in the Fund's overall costs.

Custodial expenses

The internalisation process, which has been performed in the last few years, has had an impact on the volume of custodial assets. Assets previously managed via external funds or derivatives, where custodial expenses have been included in fund fees, have partly

been transferred to in-house management. This transfer, combined with the rise in value of all assets, has led to higher custodial expenses after the internalisation. The cost is also affected by the type of asset deposited with the custodial bank. Assets exposed to emerging markets, for example, are relatively expensive to place on deposit. The Fund's custodial expenses totalled SEK 40 (39) million in 2017.

Brokerage commission

A brokerage commission is paid on the purchase and sale of equities and participations. When buying and selling other asset classes, the transaction cost is limited strictly to the difference between the buy and sell rate, known as the 'spread'. To establish comparability between different asset classes, brokerage commission is reported as a deductible item under Net result for listed equities and participations, see note 2 on page 88. Brokerage commissions in 2017 totalled SEK 76 (103) million. Of the brokerage commission, 11 (4) per cent derived from commission paid to the Fund's external managers, the remainder to the Fund's in-house portfolio management organisation. Costs amounted to 0.06 (0.06) per cent of the total trading volume. The following five counterparts (listed in alphabetical order) received commissions corresponding to 49 per cent of total commission payments: Goldman Sachs, JP Morgan, Merrill Lynch, Nordea and UBS AG.

Contribution to relative return, %

Asset class	2017	2016
Swedish equities	0.10	-0.13
Equities, developed markets	0.18	0.15
Equities, emerging markets	-0.07	-0.09
Swedish fixed-income securities	0.04	-0.06
Foreign government bonds	-0.01	0.02
Foreign credits	-0.03	0.01
Global green bonds	-0.01	-0.01
Fixed-income securities, emerging markets	0.02	-0.02
Absolute return	-0.06	-0.21
Total market-listed assets, excl. alternative investments and implementation effects	0.16	-0.34
Implementation effects*	-0.07	-0.06
Total market-listed assets excl. alternative investments and incl. implementation effects	0.09	-0.40

* Result effects to maintain exposure to strategic portfolio.

Contribution to absolute return, %

Asset class	2017	2016
Swedish equities	1.1	1.0
Equities, developed markets	2.4	3.7
Equities, emerging markets	2.2	2.1
Swedish fixed-income securities	0.1	0.3
Foreign government bonds	-0.1	0.3
Foreign credits	-0.2	1.2
Global green bonds	0.0	0.1
Fixed-income securities, emerging markets	0.2	1.0
Absolute return	-0.1	-0.1
Overlay	0.0	-0.1
FX hedge listed portfolio	1.3	-2.1
Alternative investments*	2.2	3.1
Total assets, excl. commission fees and operating expenses	9.1	10.5

* Including FX hedge.

Portfolio return

The return on the total portfolio for 2017 was 9.1 per cent, excluding commission fees and operating expenses but including performance-based fees.

Among the listed asset classes, equities in emerging markets had the highest return for the second year in a row with 20.6 per cent. Foreign equities on developed markets noted a return of 10.7 per cent in Swedish kronor, excluding FX hedging effects. Swedish shares generated a return of 11.3 per cent.

Swedish bonds generated a return of 0.6 per cent. Foreign government bonds and credits reduced in value in SEK, excluding FX hedging by –2.3 and –1.7 percent respectively. Development of bonds in emerging markets, however, was positive, with a rise in value of 3.5 per cent in SEK. The asset class will not be hedged.

Alternative investments, i.e. real estate, private equity funds, alternative credits, alternative risk premiums, Chinese A-shares and Chinese government bonds – returned 9.5 per cent, including FX hedging.

The different asset classes' contribution to the total results depends on their return and how much of the portfolio's value they constituted during the year. As a result of their large share of the portfolio, equities on developed markets contributed 2.4 per cent to the overall result. Swedish equities contributed 1.1 per cent and emerging-market equities 2.2 per cent. The return contribution of Swedish bonds and foreign state bonds was 0.1 and –0.1 per cent respectively. Foreign credit bonds contributed with –0.2 per cent while emerging-market bonds improved the result by 0.2 per cent. Alternative investments contributed 2.2 per cent, including FX hedging.

The Fund's FX hedging policy is designed to mitigate portfolio risk. To achieve this, the Fund implements a systematic FX hedging

programme of developed countries' currencies, with a view to reducing variation in portfolio worth over the long-term. Due to the net strengthening of the Swedish krona during the year, the FX hedging's effect was 1.3 per cent in the total portfolio. Because the Fund does not FX hedge its entire exposure to emerging countries' currencies, this positive effect was offset by the return of assets in foreign currency losing value. The Fund does not FX hedge emerging-market currencies.

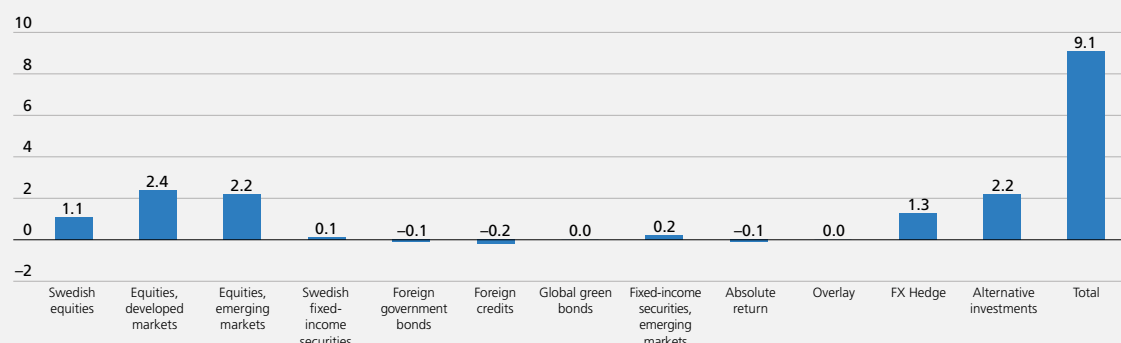
The Fund's property portfolio, excluding timberland and farmland, returned 11.7 per cent. The portfolio of timberland and farmland returned –0.1 per cent. The return on private equity investments was 9.9 per cent, while the portfolio of alternative risk premiums generated 1.8 per cent.

The Fund invests in equities on the domestic Chinese market, so-called Chinese A-shares. In view of the fact that opportunities for adding or withdrawing assets from this portfolio are subject to certain administrative constraints, it has been classified under alternative investments. The return on these was the Fund's best asset class thanks to an annual return of 36.3 per cent. A large part of this good result can be attributed to a high active return contribution from the Fund's managers.

The Fund's portfolio of alternative credits mainly comprises listed corporate loans intended for short-term revenue, but also includes high-yield credit bonds. The return for the year was 5.7 per cent.

Over the past five and ten years respectively, AP2 has generated an average return on invested assets of 9.8 and 6.0 per cent including costs per annum. Less inflation, this is equivalent to an annual real return of 9.0 per cent over five years and 5.0 per cent over ten. The portfolio has thus exceeded AP2's expected real return of 4.5 per cent per year, even though the period comprised a financial crisis.

Contributions to the total portfolio, absolute return 2017, %



Relative growth for portfolio of listed assets

The Fund's portfolio of listed securities comprises Swedish and foreign equities, Swedish and foreign fixed-income securities, tactical allocation and FX management. In 2017, the listed portfolio posted a positive return of 9.0 per cent. The total relative return, i.e. active return minus implementation effects (costs arising in connection with rebalancing and transactions that are not attributable to active management) was 0.1 per cent. The relative return is charged with –0.07 per cent attributable to implementation effects.

Over the past five years, the Fund's active return has averaged 0.36 per cent per year. Over the same period, implementation effects have averaged –0.07 per cent. Thereby, the average relative return has been 0.29 per cent. The Fund's internal goal for the relative return of 0.5 per cent per year has therefore not been achieved.

Swedish equities

The management of Swedish equities outperformed the benchmark index by 0.5 per cent. The portfolio of fundamental managed equities outperformed its equally weighted index by 0.4 per cent. The Fund's management of small cap investments were as in previous years successful, generating an excess return of 2.6 per cent. The Fund manages all Swedish equities in-house.

Foreign equities

The Fund's management of foreign equities in developed markets delivered a positive active result of 0.7 per cent. The active result for emerging-market equities was –0.5 per cent. Chinese

A-shares are managed under large-deviation mandates, and the active return for the year was extraordinarily 27.4 per cent. Since these Chinese equities are part of the portfolio's alternative assets, this active return is not included in the calculation of the Fund's combined active return.

Swedish and foreign fixed-income securities

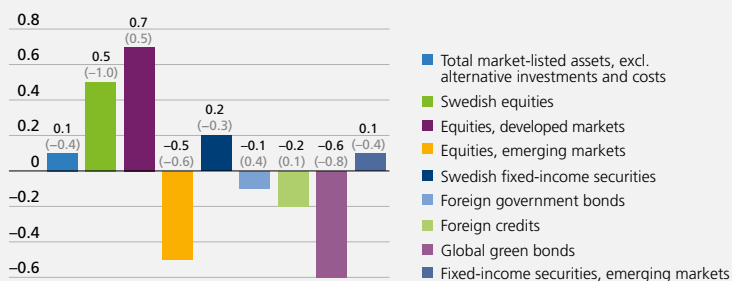
The Swedish fixed-income securities management's active return was 0.2 per cent, of which the Fund's quantitative management's active return was, although only just, positive for the eleventh consecutive year, and amounted to five basis points. The in-house managed portfolio of foreign government securities fell below the index with –0.1 per cent. The in-house managed credit portfolios' active return was –0.2 per cent.

The management of emerging-market bonds, issued in US dollars, achieved an active return of 1.4 per cent during the year. The management of emerging-market bonds in local currency was passive during the start of the year. After the portfolio was activated, the active return was –0.1 per cent, among other things due to multiple index restructuring during the year.

Tactical allocation and FX management

The Fund's in-house tactical allocation delivered a negative result of SEK –218 million. The internal active FX management generated a result during the year of SEK 11 million.

Relative return per asset class 2017 (2016), %



Overview since start

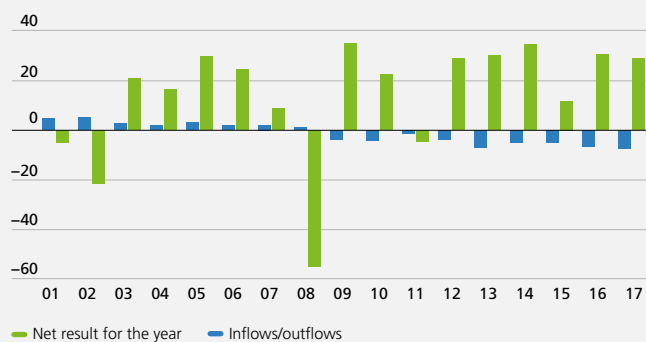
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Fund capital, SEK billion	345.9	324.5	300.6	293.9	264.7	241.5	216.6	222.5	204.3	173.3	227.5	216.8	190.6	158.1	140.3	117.1	133.5
Net outflows to national pension system, SEK billion	-7.4	-6.6	-4.9	-5.1	-6.9	-3.8	-1.2	-4.0	-3.9	0.8	1.0	1.6	2.3	1.4	2.1	2.0	3.1
Contribution from liquidation fund/special management fund, SEK million	0	0	0	0	0	0	0	0	0	53	1028	108	593	254	424	3017	1461
Net result for the year, SEK billion	28.8	30.5	11.7	34.3	30.1	28.6	-4.6	22.2	34.9	-55.1	8.7	24.5	29.6	16.1	20.7	-21.4	-5.0
Return on total portfolio before commission fees and operating expenses, %	9.1	10.5	4.1	13.3	12.8	13.5	-1.9	11.2	20.6	-24.0	4.2	13.0	18.7	11.6	17.8	-15.3	-3.7
Return on total portfolio after commission fees and operating expenses, %	9.0	10.3	4.0	13.1	12.7	13.3	-2.1	11.0	20.3	-24.1	4.0	12.8	18.5	11.4	17.7	-15.4	
Relative return of listed assets, excl. alternative investments, commission fees and operating expenses, % ¹	0.1	-0.4	0.9	0.5	0.4	1.1	-0.3	0.8	0.7	-1.8	-0.4	0.2	0.2	-0.6	-0.5	-0.4	1.7
Active risk ex post, %	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.6	1.0	0.7	0.7	0.5	0.5	0.6	1.0	1.7
FX exposure, %	33	31	30	24	23	20	16	12	10	12	11	12	11	10	8	7	10
Share of external management, %	17	17	17	28	25	29	29	23	24	22	24	17	28	37	45	38	82
Expense ratio, operating expenses, %	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.06	0.06	0.07	0.08	0.09	0.11	
Expense ratio, cost incl. commission fees, %	0.15	0.15	0.18	0.17	0.17	0.16	0.17	0.17	0.18	0.16	0.13	0.15	0.16	0.22	0.18	0.16	
Annualised return after operating expenses 5.0 years, %	9.8	10.6	8.0	9.4	10.8	2.4	0.6	3.5	4.9	3.3	12.8	8.1	4.9				
Annualised return after operating expenses 10.0 years, %	6.0	5.5	5.7	7.1	7.0	7.4	4.3	4.2									
Carbon dioxide intensity, where the absolute carbon footprint is related to the ownership share in the companies' market value (tCO ₂ e/SEK million) ²	18	20	25	28													
Carbon dioxide intensity, where the absolute carbon footprint is related to the ownership share in the companies' revenue (tCO ₂ e/SEK million) ³	28	24	29	31													
The absolute carbon footprint corresponding to owned share of the companies' total emissions (tCO ₂ e million) ³	2.6	2.7	3.4	3.6													
Carbon dioxide intensity, weighted average (tCO ₂ e/SEK million) ³	24																
Mapped market value as a proportion of capital, % ³	92	97	98	93													

¹ Relative return refers to the difference in return between a portfolio and its benchmark or reference index.

² Market value of listed equity portfolios.

³ Key figures are calculated for assets for the balance sheet items equities and participations, listed.

Fund's performance and flows 2001–2017, SEK billion



Since the Fund was established, the market has experienced two profound crises. First came the 'IT bubble', coinciding with the launch of the Fund, followed by the financial crisis, which peaked in 2008. During 2011, the financial markets were sharply affected by debt crises in different parts of the world. After that, the world's stock markets once again noted solid growth. These crises have been mirrored by the Fund's sharply fluctuating net result and capital over its first 17 years of operation.

Alternative investments

AP2 has gathered its investments in non-listed real estate equities (including timberland and farmland), private equity funds, alternative risk premiums, alternative credits, investments in Chinese government bonds and the domestic Chinese equities market under asset class Alternative Investments.

The overall return on alternative investments for the year was 9.5 per cent. Alternative investments, with the exception of private equity funds whose holdings are hedged as the listed equity portfolio, are hedged at 100 per cent in developed markets while assets in emerging countries are not hedged. The return for each asset class is reported including FX hedging. The result of FX hedging in 2017 was, in contrast from several previous years, positive due primarily to the weakening of the US dollar against the Swedish krona.

Private equity funds

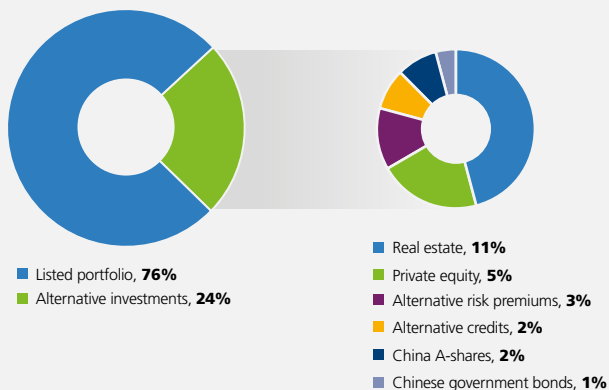
The global private equity market's establishment of new funds in 2017 was higher than for the previous years and in line with the peak year in 2008. The share of the private equity funds' managed assets of the total market value of listed equities and private equity, however, did not increase but is stable.

The number of corporate acquisitions (so called M&A) was lower in 2017 than the previous two years. The private equity funds' share of these transactions, however, was slightly higher than for the past two years but has been relatively stable after the financial crisis which took place around ten years ago.

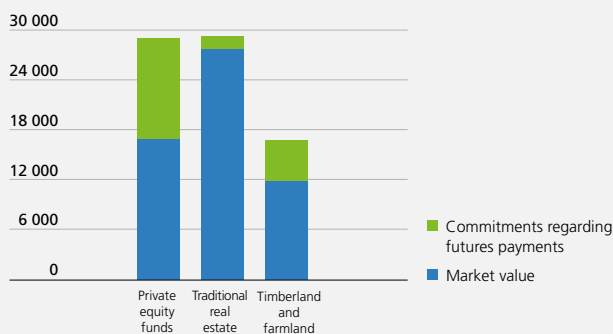
AP2 made 12 investments during the year with a total commitment of SEK 4.4 billion. Essentially, new commitments were made to existing managers through investments in CVC, Chequers, EQT, New Mountain, NEA, Francisco Partners, CITIC and TPG (two strategies, Growth and Rise) with the addition of new supplementary managers such as GI Partners, Thoma Bravo and Blackstone. GI Partners invests in medium sized companies in North America, Thoma Bravo in medium sized companies within the software sector in the United States and Blackstone in large global companies in Asia. TPG Rise is a new strategy with an existing manager. Read more on page 30.

As of 31 December 2017, the risk capital portfolio's total commitments amounted to SEK 33.9 billion. Since the start in 2001, SEK 25.5 billion (including management fees) has been invested of which SEK 22.3 billion has been distributed. During 2017, SEK 3.6 billion was invested and SEK 4.9 billion was distributed, which resulted in a net inflow of SEK 1.3 billion. A large portion of the distribution is from the sale of five fund investments. The activity within the funds in the portfolio were as previous years very high

Alternative investments' share of total portfolio and its constituent elements, %



Non-listed alternative investments, classified according to market value and commitments remaining, SEK million



with many investments, exits and IPO:s. Exposure to North America was 56 per cent, Europe 23 per cent, Asia 18 per cent and the other 3 per cent. The portfolio is diversified per sector, where information technology represents 28 per cent, followed by consumer discretionary of 16 per cent and healthcare of 12 per cent. In terms of investment style, buyout and growth funds have the highest share with 59 per cent followed by venture funds with 23 per cent. The exposure by region, style and sector has changed slightly during the year with the impact primarily from increased valuations of technology companies.

The Fund's approach is that a continuous investment phase in a diversified portfolio provides better access to the funds where AP2 wants to invest and a more stable and long-term sustainable return. In recent years, the portfolio's exposure balanced on the boundary of the statutory limit of five per cent, due to the fact that the US dollar rate gradually strengthened from the end of 2013 to December 2016. AP2's private equity portfolio has a significant degree of exposure to the US market and the US dollar. To avoid exceeding the maximum permissible exposure, the Fund has sold five fund investments. On 31 December 2017, the private equity portfolio's exposure amounted to 4.74 per cent. Six funds with a total market value of SEK 0.7 billion are excluded from the calculation. These funds contain more than 50 per cent listed securities and are therefore not defined as non-listed assets.

The return for private equity funds in 2017 amounted to 9.9 per cent. The portfolio's market value was SEK 16.9 billion (excluding FX hedging) at the end of the year. The portfolio of private equity investments has since the establishment continued to generate a return that in the long-term is better than for the publicly-traded market.

Fees paid for the management of non-listed assets, where reimbursement is permitted prior to profit sharing and is deemed likely, are reported as part of the acquisition value of such assets. See also the Fund's accounting and valuation principles on page 86.

Traditional real estate

The Fund's unlisted real-estate holdings today consists mainly of a 25 per cent ownership share in Vasakronan Holding AB, 41 per

cent ownership share in US Office Holdings and a 25 per cent ownership share in Cityhold Office Partnership. All investments focus on high quality, traditional real estate, centrally located in real-estate markets with good liquidity. In addition to this, the portfolio has previously been supplemented with investments in real-estate funds; two in Asia, one in Latin America and one in Poland. In 2017, it was decided that a fund investment would also be made in China with a focus on buildings for logistics operations.

By investing in real estate, the Fund generates a solid long-term direct return and spread of risk in the total portfolio.

Vasakronan is owned jointly by the First, Second, Third and Fourth AP Fund. It is Sweden's largest real-estate company, with a concentrated and attractively located portfolio of real-estate holdings in the Stockholm, Gothenburg, Öresund and Uppsala areas. Vasakronan owns some 120 properties with a market value of SEK 127 billion.

Cityhold Office Partnership was formed together with the First AP Fund and the US pension fund TIAA in 2015. The company was created to become a leading platform for investments in Europe. The office buildings that were previously owned by TIAA General Account in Europe and the First and Second AP Fund's properties in Cityhold Property AB are part of the company. The real-estate portfolio is valued at approximately EUR 1.9 billion and consists of 13 qualitative office properties located in good locations in London, Paris, Munich and Hamburg. During the year, two properties were sold, one in London and one in Munich. TH Real Estate handles the company's administration, as well as investment and management services.

AP2 along with the national South Korean pension fund NPS and the Tishman Speyer real-estate company own the US real-estate companies US Office Holdings and US Core Office I and II. The companies own properties both directly and via joint ownership. The property portfolio consists of a total of 23 centrally-located office properties. The market value of the companies' share of the properties is approximately USD 4.7 billion. During the year, a property in Boston was acquired. 80 per cent of the portfolio's value consists of properties on the east and west coast of the US in New York, Boston,

San Francisco, Seattle and Los Angeles, and 15 per cent of properties are located in Chicago.

Since 2013, AP2 has also decided to invest in five real estate funds in emerging markets:

- Gateway Real Estate Fund IV & V, which invests in properties in East Asia, particularly China.
- Hines Poland Sustainability and Income Fund, which invest in office and logistics properties in Warsaw and Krakow.
- GTIS III, which invests in real estate in Brazil with a focus on Sao Paulo and Rio de Janeiro.
- Centurion II, which invests in new production and logistics properties in China, mainly in Shanghai and Beijing.

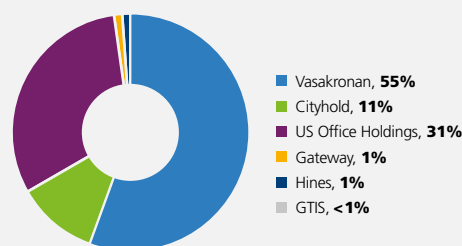
The return on AP2's investments in traditional properties was 11.7 per cent in 2017 and annualised, since its launch in 2001, the return has been 13.6 per cent.

Timberland and farmland

In 2010, AP2 made its first investments in farmland and timberland, as part of its strategy for diversifying the overall portfolio. These investments are both considered to generate a stable return, in light of the fact that the underlying trend towards increased urbanisation and improved welfare, in combination with a growing global population, is increasing demand for forest and agricultural products. Both asset classes are also deemed to be relatively insensitive to cyclical fluctuations, added to the fact that covariance with other asset classes – such as equities – is considered to be low.

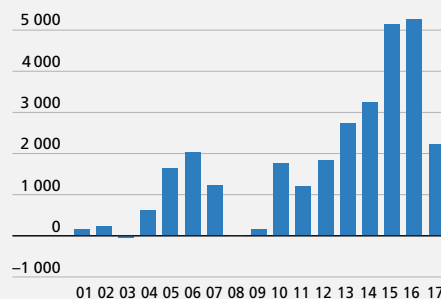
Today, the portfolio of timberland and farmland comprises of twelve different funds/companies, with joint investment commitments totalling SEK 16.1 billion as at 31 December 2017. For AP2, it is important to choose fund managers that subscribe to the same values of long-term, responsible and sustainable investment. The Fund has elected to invest in farmland in the form of joint ventures with other investors, a form that suits AP2's long-term approach to these investments. The farmland is predominantly located in Australia, Brazil, Poland and the United States. The main focus is grain production on large-scale, high quality farmland, in countries that possess clearly-defined legal struc-

The investments' share of the traditional real-estate portfolio, %

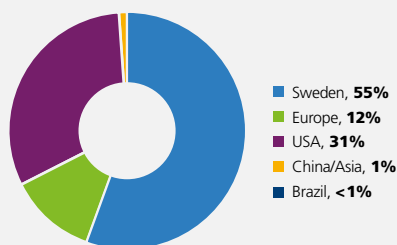


Portfolio growth, real estate

Annual result from Fund's holdings in traditional real-estate companies since start (excl. FX hedge), SEK million



Geographic market share of the traditional real-estate portfolio, %



tures, where agricultural production is effective and the countries are net exporters of agricultural products.

AP2's forest properties are located mainly in the USA and Australia. They focus on traditional forest management for the production of traditional pulpwood and saw timber, featuring a careful balance between softwood and hardwood. The majority of these investment commitments are structured as funds. As a complement to these investments, AP2 has also invested in a company engaged in timberland investments in Latin America and Europe, where production is geared partly towards biomass.

All the funds/companies in which AP2 has invested are clearly focused on the sustainable, responsible ownership and management of their real-estate investments and on the certification of their operations (SFI, FSC and AFS).

In 2017, the Fund generated a return of –1.1 per cent on investments in farmland and 2.1 per cent on timberland investments. The negative return for farmland is primarily derived from unrealised foreign exchange losses in the companies. All timberland and farmland investments in the portfolio note stable and positive revenues in local currencies. The market valuations for the timberland and farmland managed by the funds and companies in which AP2 has invested also show a stable level.

Alternative credits

AP2 has allocated two per cent of its strategic portfolio to investments in credit opportunities that have arisen in connection with the revised regulations and restructuring of financial markets, introduced in the wake of the global financial crisis. One example

is that the banks have transferred their lending from small and medium enterprises to the very largest companies.

AP2's investment assignment is long-term, providing the stability needed to benefit from prevailing market conditions. The full worth of the value created can only be realised when the securities and credits mature, requiring the investments to be retained for their full term.

The average term for the credits that dominate the investments selected in the credit market segment (loans to companies) is shorter than for the more common bonds that institutional investors these days have large exposure towards. Shorter terms and, not uncommonly, FRNs (floating rate notes), mean that sensitivity to potential hikes in interest rates from the currently extremely low levels is less.

A number of these assets are defined as non-listed, in which the AP2 has only limited freedom to invest, due to the current legislation affecting non-listed investments. The legal limit of listed structures reduces the Fund's investment selection with a poorer expected return and less diversification as a result. The remaining options are, however, sufficient to meet the Fund's requirements.

The anticipated return is in line with the Fund's long-term assumptions concerning the return on equities, seven-eight per cent. With an anticipated return at this level, the investment contributes to an increased, absolute and risk-adjusted, return in the long term.

Since the portfolio was established, AP2 has conducted ongoing investment in corporate credits by utilising external

fund managers that apply broad and in-depth credit analyses. The return for 2017 was 5.7 per cent.

Alternative risk premiums

Alternative risk premiums shall contribute to increased diversification and generate higher risk-adjusted return, since the portfolio is designed to be less dependent on traditional stock market risk. The strategies adopted by the portfolio are linked to stock market volatility, premiums for reinsuring insurance companies, premiums associated with the market for corporate acquisition and convertibles as well as strategies focused on the FX market and the market for future dividends on corporate profits. The return for 2017 was 1.8 per cent.

Premiums for reinsuring insurance companies constitute a significant part of the portfolio with alternative risk premiums. During 2017, a large number of unusually severe storms, and several major earthquakes occurred, which had a negative effect on the return for this part of the portfolio. Despite this, these mandates reported an overall positive return.

Chinese A-shares

Since 2013, AP2 has invested in the market for Chinese A-shares. In the strategic portfolio, two per cent of the capital has been allocated to Chinese A-shares. The management takes place through three external managers: APS, Cephei and UBS.

The Fund seeks exposure to the structural development of the market and the management is performed with relatively high deviation from the Chinese benchmark index, MSCI

“ At the end of 2017, AP2 established a mandate for investments in Chinese government bonds.

China A gross. The index is considered ineffective and notable for high volatility, which makes a high deviation in relative terms likely. During 2017, all of the Fund's managers continued to show a positive relative return against the benchmark index. The absolute return for 2017 amounted to 36.3 per cent.

Chinese bonds

At the end of 2017, AP2 established a mandate for investments in Chinese government bonds. The investment mandate amounts to approximately one per cent of AP2's total managed capital. The management of the mandate takes place in-house and the strategy means that no active risk is taken in the mandate, the management is instead index-based. The return for the mandate amounted to -0.7 per cent.

Exposure to the Chinese bond market is in line with AP2's long-term strategic goal to gradually increase the proportion of managed capital in emerging markets. The fact that the exposure has been generated before many other large asset managers is also expected to contribute to a good return.

RISK MANAGEMENT

Historically low volatility

The Swedish Parliament has formulated clear guiding principles as to how the AP Funds shall interpret their duty as fund managers. The AP Funds shall take financial risk in an effective manner with a focus on future pensions. Apart from a few constraints, the funds have been awarded considerable freedom in selecting appropriate risk and investment strategies, independently of each other. The selected strategy shall be neutral with respect to generations and have a preparedness to meet current payments to the pension system.

The starting point for AP2's investment strategy and risk taking is that the AP Funds are only able to influence future pensions through how asset management affects the pension system's automatic balancing mechanism. Thus the Board of Directors has implemented the Fund's goal for asset management to minimize the consequences of the automatic balancing mechanism on future pensions. It is the primary risk that controls the design of the investment strategy rather than the chosen portfolio's risk. By far the greatest portion of financial risk taken by AP2 derives from economically motivated long-term exposures to risk premiums manifested in the strategic portfolio.

The financial risk taking is therefore directly linked to the Fund's assessment of the development of the total pension system over the coming decades. This is subject mostly to factors outside the Fund's control, such as demography, immigration, employment levels, economic growth and so on. The financial risk taking is also governed by the Fund's assessment of the financial markets' long-term prospects for generating return. A key point when determining the choice of strategy is that the AP Funds, when compared to the Swedish national pension system as a whole, are of relatively limited size. Their limited size means that the funds are forced to take a substantial level of financial risk, but also that the risk will have a minor impact on the pension system.

The long-term asset allocation and risk capacity that AP2 deems will minimise negative effects on future pensions has a relatively high proportion of risky assets. This means that the value of the portfolio, from time to time, is expected to show a higher variation than if the asset allocation had been more defensive. A guiding principle governing the development of AP2's long-term investment strategy is to highest possible degree diversify the risk in the portfolio, without compromising on the demand for a high return. The Fund seeks to minimise the risk of a negative trend in the pension system over the longer term in this way whilst at the same time limiting the portfolio's shorter term risk to maximum extent.

There are several ways to characterise the Fund's long-term orientation for its chosen portfolio. One way is to describe it as

an allocation between different asset classes and strategies. Another way is to describe it in terms of expected returns. A third way is in terms of the portfolio's expected risk which is the basis in achieving the overall objective – to minimise the risk of lower future pensions – the mission assigned to the AP Funds by the government.

Risk governance

The risk-taking of the Fund is determined by three frameworks. AP2's risk policy, determined by the Board of Directors, outlines the scope of the Fund's overall level of risk-taking. There are more detailed instructions about risk management and risk control in the document 'Guidelines for Investment' belonging to the CEO. For individual mandates, parameters defining levels of exposures to risks are specified in Investment Guidelines. The starting point for AP2's risk process is the annual ALM study. It is based on several assumptions regarding long-term market growth and risk levels for different asset classes, this is a paramount tool in the design of the strategic portfolio.

Three cooperative risk functions

The Fund's ongoing risk management is conducted by three independent but cooperative functions.

Risk budgeting

The Fund's Board of Directors has established the target of a 0.5 per cent relative return, in addition to the return of the strategic portfolio. To generate this return, the Board has specified that the active risk (tracking error) shall not exceed three per cent. The purpose of the risk budget is to allocate alpha targets and tracking error limits between the Fund's portfolio management teams, in order to achieve maximum risk utilisation. In other words, the Fund's information ratio should be maximised. The idea behind the risk budget is to delegate targets and means to departmentally managed mandates. The Investment Guidelines describes the risk framework and targets for each mandate. The risk budget is

drafted annually. The front office management team drafts a proposal which is presented to the Fund's executive management for approval.

Compliance

Compliance is responsible for ensuring that the legal and ethical aspects are managed correctly and in compliance with current rules laws and regulations. The main duty of the compliance function is to spread knowledge and awareness of the regulations, that in a broad sense, are important to AP2. This is done in many ways, but mainly by ensuring that in-house rules, policies and guidelines are firmly established and anchored in the organisation. External laws and rules include a Government act that specifically apply to the AP Funds, as well as capital market regulations, such as the shareholder transparency directive. In-house codes of conduct address areas such as employees' private securities transactions and contractual agreements with external fund managers.

Risk Management

Risk Management is responsible for the monitoring and analysis of the Fund's financial and operational risks. This function is operationally separate from the asset management organisation, ensuring complete independence. The department is also responsible for developing guidelines and risk models, as well as providing advice and support to the Fund's executive management and portfolio management teams.

The Fund's risks

The most significant risks to which the Fund might be exposed to can be divided into financial and operational risks. The financial risks primarily comprise of market risk, credit risk and liquidity risk.

Market risk

Market risk refers to the risk that the value of or future cash flows from a financial instrument will change due to market movements. Market risk is measured daily both in absolute terms and relative to the benchmark. For AP2 the most relevant market risks are equity, interest rate and exchange rate risks. The Fund analyses and monitors market risk at fund level, by asset class and per mandate. In this process, the Fund relies on various tools and methods: risk attribution, stress tests and scenario analyses. It also conducts ongoing ad hoc analyses to shed a light on risk

contributions from different parts of the portfolio. Furthermore, the Fund conducts back testing of risk models, as well as the assessment and review of the risk limits.

Credit risk

Credit risk refers to the risk of loss arising from a creditor's failure to fulfil a credit commitment. The credit risk comprises:

- Counterparty risk – the risk that a counterpart in an OTC transaction may become insolvent and unable to fulfil its commitments.
- Issuer risk – the risk that an issuer may become insolvent and unable to fulfil its commitments.
- Liquidation risk – the risk that the counterpart may be unable to fulfil the contract when payment is due.
- Concentration risk – the risk posed when large, important or substantial volumes and/or commitments are concentrated among a limited number of issuers or to a specific sector or geographical area.

AP2 limits the credit risk in the fixed income portfolio amongst others through credit ratings and exposure limits. In the outset a fixed-income benchmark is selected for the strategic portfolio. From this index permitted deviations in terms of credit rating exposures limits are determined. To assess the credit risk, the median rating (lower median for split ratings) are used from credit institutes S&P, Moody's and Fitch. When a rating is available from two institutes only, the lowest rating is selected. If a rating is available from just one institute, the judgement is based on this alone. In addition, the Fund has credit risks in fixed-income funds and non-listed assets (alternative credit funds).

The Fund's counterparty risk is monitored and analysed on a daily basis. Every new counterparty is subject to a credit evaluation. This is followed by continual evaluation of all relationships with counterparties. The purpose and nature of the specific business relationship is always the starting point. As well as the counterparty risk associated with deposits and non-cleared derivatives (OTC derivatives), there is a risk concerning cleared transactions against clearing institutes, although this is minimal. Counterparty risk is limited by means of a Credit Support Annex (CSA) agreement with the counterparty.

Issuer risk is not limited to the risk that the issuer may become insolvent. Losses often arise long before a declaration of bankruptcy. AP2 limits issuer risk by establishing credit risk limits, for

individual issuers as well as groups of issuers. This is achieved, for example, by limiting the total credit risk posed by different groups of issuers based on credit ratings per security.

The liquidation risk is minimised by automatically checking the buy and sell orders of equities and bonds with reference to the broker/counterparty. Special attention is paid to possible deviations, which quickly can be corrected. Payment and execution of the transaction is executed simultaneously.

AP2 manages the concentration risk by analysing exposures, in terms both of geographical region and industry, but also the exposures of issuers/issuer groups. The most influential factor in managing concentration risk is the choice of benchmark.

Liquidity risk

Liquidity risk refers to the risk that securities cannot be converted into cash without incurring a substantial loss or considerable cost at the same time of the transaction. The AP Funds must also be prepared to transfer funds to the Swedish Pensions Agency. The Fund's liquidity risk is limited by the Swedish National Pensions Funds Act that requires that no less than 30 per cent of the Fund's assets shall be placed in assets with low credit and liquidity risk, and that a maximum of five per cent of the Fund's total assets may be invested in private equity funds. The liquidity risk on the liability side is very limited, consisting of derivative liabilities.

Operational risk

Operational risk refers to the risk of losses arising from inefficient or failing internal processes, human error, IT-system failures or external events. AP2 identifies operational risks using a variety of analytical methods and tools – including self-assessment, incident log, process analysis, risk indicators and workshops. The assessment of identified operational risks is then based on determining the likelihood of them happening and the potential consequences. Based on this analysis, the risks are prioritised and an action plan is drafted.

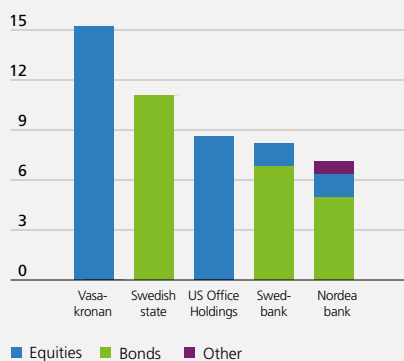
The process analysis has been employed to identify operational risks since 2014. A process organisation with process sponsor, sub-process owner, process manager, process team and process support have been appointed and there is a structure for follow-up with a joint meeting once a year.

The starting point of the continuous development of the process analysis is to work with these processes and monitor any associated risks as well as ensuring that operations are conducted in compliance with the agreed processes. Process development requires a flexible approach that is defined.

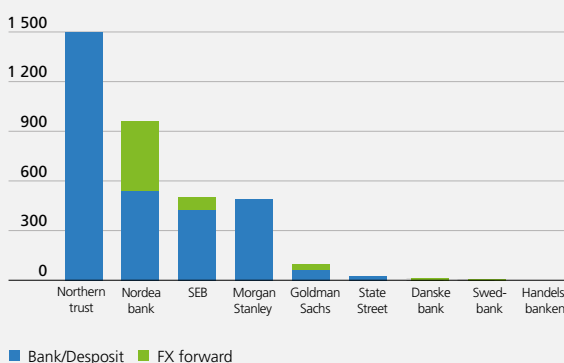
The portfolio's risk

AP2 is reporting a reduced active risk ex-post for the total listed portfolio for 2017. Portfolios where the Fund has chosen a

Exposure to issuer, SEK billion



Counterparty risk, SEK million



higher risk profile have in most cases generated a solid return. The active ex-post risk in 2017 on 31 December amounted to 0.37 per cent (0.40 per cent). The level of active risk noted for asset class Swedish equities fell from 2.0 per cent to 1.7 per cent and increased for the asset class emerging markets interest rates from 0.3 per cent to 0.4 per cent. Other asset classes noted only minor changes during the year. Correlation between the relative returns on asset classes in the listed portfolio remained low over the year, indicating a good risk spread in the Fund's portfolio.

The ex-post volatility of the listed portfolio, calculated over the twelve months, fell slightly during the year and amounted to 3.9 per cent by year-end.

The information ratio for the total listed portfolio was 0.2 by year-end. The Sharpe ratio for the Fund's listed portfolio increased during the year, due to a stronger absolute return and low volatility. It was 2.5 (1.4) by year-end.

The duration calculated for the portfolio of fixed-income investments was 5.4 (4.9) years as per 31 December, which corresponds to an approximate increase of 0.5 years compared with the previous year. The increase comes mainly from the asset class foreign government bonds. In the other asset classes, there were smaller changes in relation to the total fixed-income portfolio.

The credit quality in the fixed-income portfolio was slightly changed during the year. The Fund had a proportion of AAA of

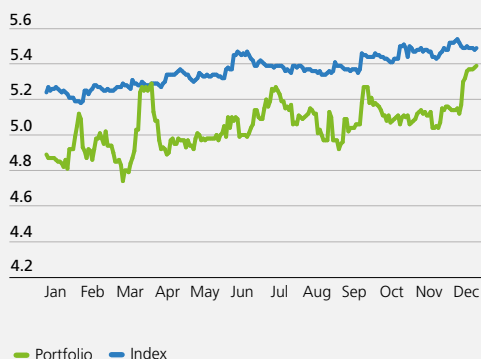
39 (41) per cent, a proportion of A of 22 (20) per cent and a proportion of BBB of 20 (20) per cent.

There were large differences in the estimated ex-ante volatilities for the currency hedged asset classes. Alternative investments showed the highest absolute volatility, fixed-income assets had very low volatility whilst equities were in between. However, equities had a high ex-ante correlation to the Fund's hedged total risk, fixed-income assets had low or negative correlation, and alternative investments were in between.

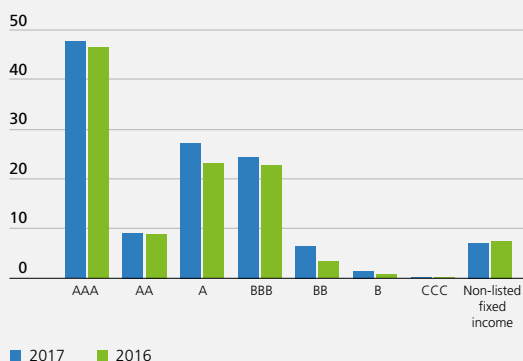
The Fund's ex-ante volatility was 5.9 per cent. The asset classes with equities dominated the risk. Interest rate-bearing asset classes contributed with very little risk, the total currency risk (mostly from emerging markets) were many times greater than the Fund's correlated interest rate risk. FX hedging of the Fund's foreign assets decreased the risk by approximately 0.2 per cent, it was mainly US dollars that were hedged. Traditional real estate and private equity funds were the asset classes other than equities, that contributed with the most risk.

The Fund's ex-ante volatility has decreased by 1.6 per cent, which is a big change. No risk reduction is due to reallocations. All risky asset classes and foremost equities had historically low market volatilities. These lower volatilities explain two-thirds of the risk reduction. One third of the reduction derives from decrease in market correlation between different asset classes,

Duration 2017, year



Credit risk, SEK billion



and as a result, diversification appears even better than the previous year.

The listed portfolio's ex-ante active risk was 0.4 per cent. Systematic equity risk (deviations in the country, sector and style) and systematic interest rate risk (deviations in durations and spreads) accounted together for about 40 per cent of total active risk. Total idiosyncratic risk was approximately one third and the total deviations in currency exposures accounted for approximately a quarter. Swedish equities and Tactical Allocation (TAA) were the teams that took the most active risk. Swedish equities mostly took idiosyncratic active risk while TAA mostly took active risk in currencies.

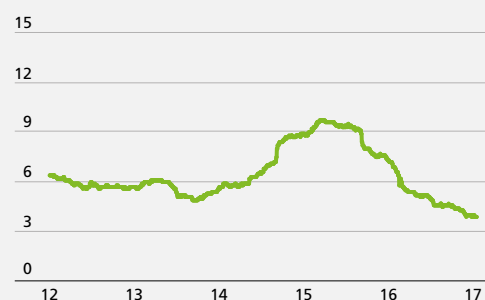
The Fund's risk measured as 95 per cent daily parametric VaR amounted at the end of the year to approximately SEK 2.1 billion. This means that the Fund is forecasting the risk of losing SEK 2.1 billion on the worst day of 20. Approximately 60 per cent of this risk comes from equities. The Fund's one-year volatility in Swedish kronor was approximately SEK 20 billion. This means that with a standard deviation probability, the Fund estimates that next year's results will end up between plus or minus SEK 20 billion, provided that the positions from the end of the year do not change.

Risk measured as Value-at-Risk (VaR) for AP2's total portfolio, 2017

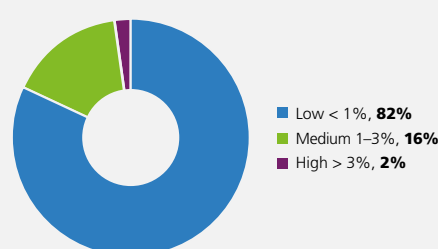
SEK million	Contribution to ex-ante VaR (95%, 1 day)	Contribution to ex-ante volatility (1 year)	Percentage risk (%)	Percentage market value (%)
Equity risk	1 275	12 239	60	43
Interest rate risk	53	510	3	33
Currency risk	255	2 452	12	–
Alternative investments	537	5 155	25	24
Total AP2	2 120	20 356	100	100

VaR and volatility are calculated according to the MSCI BarraOne's parametric factor model, which uses a one-year half-life for factor volatility and a three-year half-life for correlations.

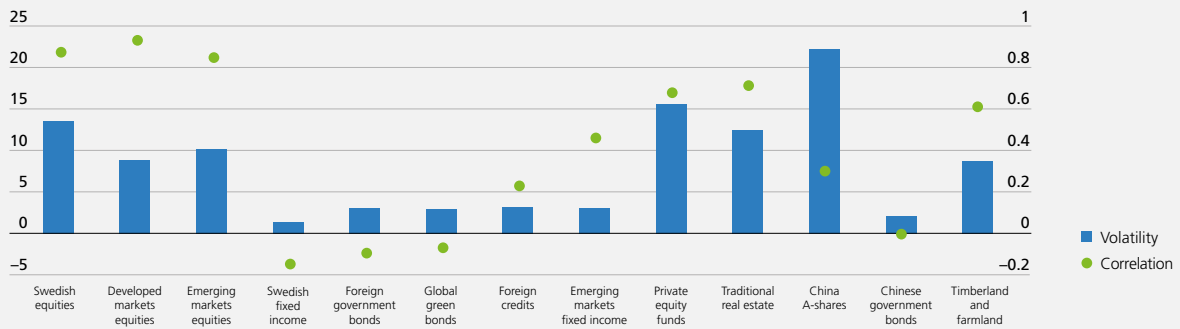
Volatility in the listed portfolio the last five years, %



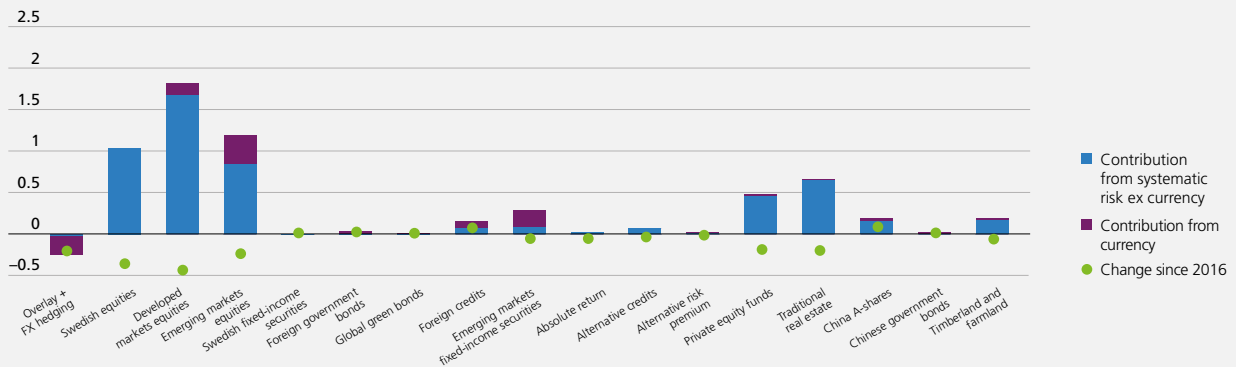
Allocation of active risk, %



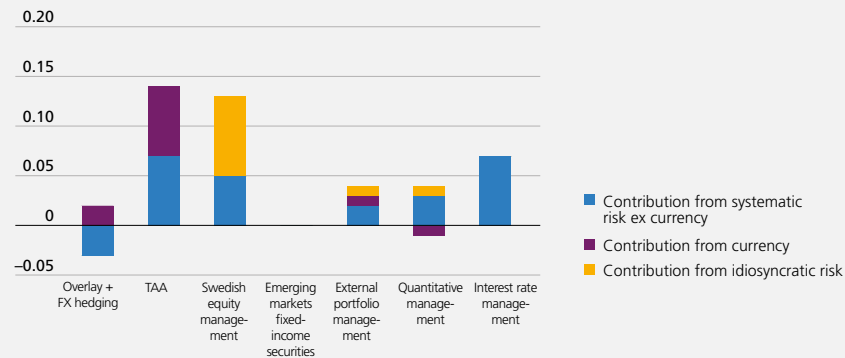
Ex-ante volatility and correlation to total portfolio per currency hedged asset class



Contribution to ex-ante volatility by asset class and change, %



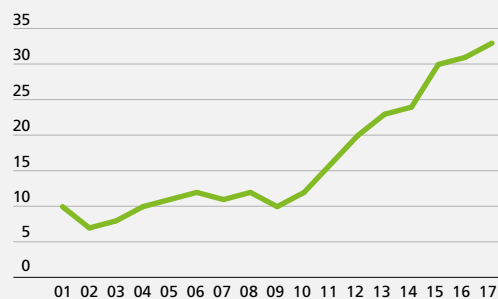
Contributions to listed portfolio ex-ante active risk, %



FX exposure

Degree of FX exposure is a risk factor that can have an impact on the value of all asset classes traded in currencies other than the Swedish krona. By the end of the year, 33 (31) per cent of the Fund's portfolio was exposed in foreign currency. The Fund's largest exposure was to USD, CNY and HKD. The Fund's hedging policy is determined by the Board of Directors and is part of the Fund's portfolio optimisation process. This policy aims to reduce portfolio risk, and a systematic FX hedging programme is actively implemented. The portfolio's total FX exposure in 2017 has meant a negative impact on the result, as a result of the net strengthening of the Swedish krona against other currencies. The hedging programme has had a positive impact on the net result. The Fund reported an overall negative result on FX transactions for its total portfolio, including FX hedging amounting to SEK –6.5 (8.7) billion.

FX exposure, growth since start, %



— FX exposure Second AP Fund

Statutory limit for FX exposure is 40 per cent.

FX exposure 2017 and 2016, equivalents in SEK million

31 December 2017	USD	CNY	HKD	JPY	ZAR	BRL	Other	Total
Equities and participations	83 213	8 090	8 456	9 593	2 506	2 121	48 239	162 218
Bonds and other interest-bearing securities	43 542	3 410	–	–	2 110	1 599	39 016	89 677
Other assets and liabilities, net	509	306	56	121	77	137	1 417	2 623
Derivatives excl. FX derivatives	0	–	–	–	–	0	0	0
FX derivatives	–85 066	–	–92	–3 025	41	–84	–53 506	–141 732
FX exposure, net	42 198	11 806	8 420	6 689	4 734	3 773	35 166	112 786

31 December 2016	USD	HKD	EUR	JPY	BRL	INR	Other	Total
Equities and participations	80 185	7 375	16 074	8 583	2 237	2 320	35 125	151 899
Bonds and other interest-bearing securities	43 953	–	16 216	–	2 404	–	18 542	81 115
Other assets and liabilities, net	–1 410	90	1 012	30	493	1 776	840	2 831
Derivatives excl. FX derivatives	9	–	268	6	–	–	–1	282
FX derivatives	–85 278	–64	–27 085	–2 984	64	528	–21 666	–136 485
FX exposure, net	37 459	7 401	6 485	5 635	5 198	4 624	32 840	99 642

FX exposure is reported as per the Fund's true management of FX risk. This means it is based on local currency at the trading location, not on the currency pertaining at the company's registered office.

More efficient business processes

The internalisation process, which was initiated in 2012 and which was completed in 2015, has resulted in both lessons and lasting changes in AP2's administration and operational model. There are three areas that have worked in concert to make it possible to handle a larger amount of transactions with the same workforce as before the internalisation was started. The internalisation has left more impressions than just cost savings.

Reduction in the amount of incorrect transactions

In order to consistently manage an increased volume of transactions within the existing organisation, an initial analysis was made which showed that the most time-consuming part was the correction of incorrect transactions. Several parallel projects were carried out to reduce as much time as possible between registering the transaction and settlement, i.e. settlement from an administrative perspective. An important project in this context has focused on enabling a link between the execution system and the portfolio system, thereby eliminating a number of process steps associated with operational risks.

Streamlining the input of basic data

As well as the projects described above, work has also been conducted with streamlining the process of inputting basic data in the portfolio system. This has resulted in major quality improvements while at the same time, the time required for maintenance and new setup of the basic data has significantly been reduced.

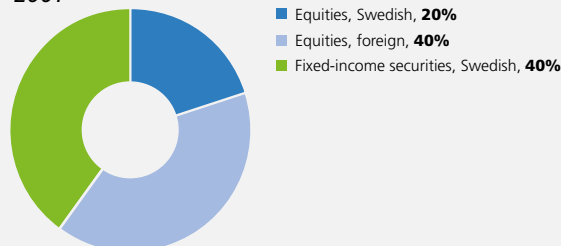
The aforementioned projects to reduce the amount of incorrect transactions and streamline the input of basic data have contributed separately and jointly to an efficient transaction chain. But in order to achieve the KPIs (critical success factors) that have been formulated as a goal for the amount of incorrect transactions and time required per transaction, further measures will be required.

Outsourcing parts of the transaction flow

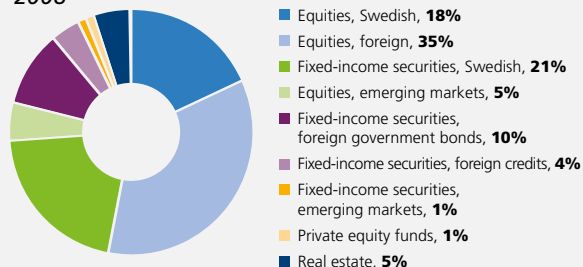
To achieve an even greater degree of efficiency, it was decided that two stages in the transaction process would be outsourced – matching and settlement of transactions – to the custodian bank. This has meant that large parts of the ongoing work that took place within the Fund's back-office now performed by the custo-

The road to today's well diversified portfolio

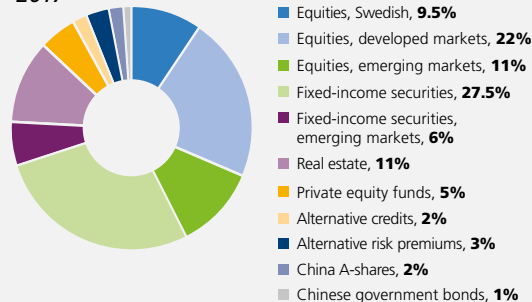
2001



2008



2017



dian bank instead. The Fund's in-house resources can therefore to a greater extent focus on areas in which the ambition is for the Fund to possess cutting edge expertise. Implementation of different asset classes in new markets, with related administrative challenges, is an example of such an area. This autumn's implementation in the Chinese bond market placed stringent requirements on the Fund's back-office which added value to the business chain through its specific competence.

Another lesson from 2017's project on the transaction flow is that the implementation of the projects has been made possible by a major internal focus, commitment and mutually beneficial collaboration between departments. As a result of this, organisational changes have taken place within the transaction support organisation and a business development group has been formed to be able to take advantage of and develop the driving force for continued improvements. That is why, going forward, there will be a continued focus on increasing the automation of the operating activities in order to constantly seek improved cost efficiency.

Cost comparison from a global perspective

An established method for measuring and comparing the cost efficiency of pension funds from an international perspective has been developed by CEM (Cost Effectiveness Measurement Inc.). The method enables a comparison that takes into account several factors that have a strong impact on the overall cost of man-

aging a fund: the volume of assets under management, the degree of assets under active management and external mandate, and the relative allocations for each class of asset.

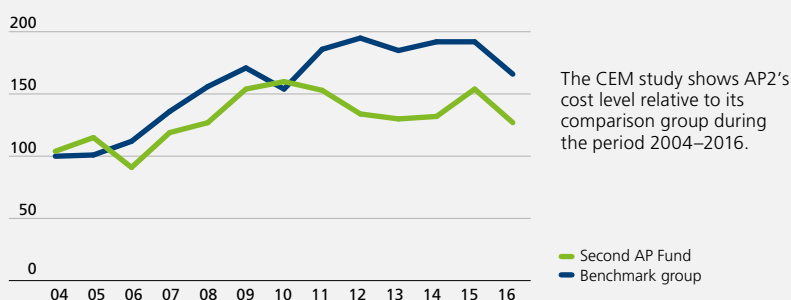
In the study, a pension fund's costs are compared with those of an international group of fund managers of approximately the same size and with a portfolio of similar composition. AP2 has participated in CEM's annual benchmark study since 2004 and, according to the latest analysis, which covers 2016, AP2's portfolio management continues to be successful and cost-efficient. The Fund's cost level is with a good margin still lower than the comparison group, which is mainly due to a significantly lower proportion of external management and cost-effective in-house portfolio management.

Implementation effects and rebalancing

The fact that the credit market is occasionally subject to a high degree of volatility places special demands on flexibility, to enable adjustments in mandate and investment focus. Fund assets shall be exposed to the markets in an efficient manner, as per the strategic portfolio, and shall be rebalanced during major fluctuations in the market. This requires both a well-developed methodology and high degree of expertise.

AP2 employs a floating strategic benchmark index and the actual portfolio is adjusted daily to replicate this. The costs and revenues attributable to strategic changes in the benchmark

**Cost-efficiency comparison with international pension funds
2004–2016, indexing**



Source: CEM

index, known as 'transitions', and the ongoing rebalancing of the strategic portfolio, are referred to as implementation effects. In 2017, these implementation effects totalled –0.07 per cent.

VAT

As of 2012, the AP Funds became VAT registered. Consequently, VAT is now liable on services charged from outside Sweden. Since the funds are not entitled to claim refunds on VAT paid, this VAT registration has led to a direct increase in the Fund's costs for such services. In 2017, these costs relating to VAT on services acquired from outside Sweden amounted to SEK 31 (39) million.

Cost efficiency through cooperation with other AP Funds

Through four independent buffer funds with the same assignment, an efficient and fair competition has arisen and led to a cost-efficient management. This has also resulted in the economic power, which the fund capital involves, being spread and not becoming too concentrated. In areas that do not jeopardise the competition between the funds, the AP Funds work together to achieve cost savings, synergies and an efficient use of resources. It is also important to ensure a relevant exchange of experience, knowledge and working methods between the organisations.

During 2016, each CEO of the First, Second, Third and Fourth AP Fund initiated an additional increased focus on cooperation between the funds. The cooperation is already happening today



... a business development group has been formed to be able to take advantage of and develop the driving force for continued improvements.

in various established forums in the form of nine coordinating groups with various compositions of representatives from the different AP Funds. The Sixth and Seventh AP Fund are also part of some of the groups. What these cooperation efforts have in common is that they are conducted based on the added value that the collaboration creates both for each individual fund and jointly for all funds. The different coordinating groups are the Council on Ethics, Communication, Administration Managers, Legal and Compliance, Reporting, Risk & Performance, HR, the IT Management and the Back Office groups. Within the framework of the AP Funds' Council on Ethics, the cooperation primarily consists of analysis and dialogue with foreign listed companies to influence the companies in environmental and ethical issues.

Income Statement

Amounts in SEK million	Note	Jan–Dec 2017	Jan–Dec 2016
Operating income			
Net interest income	1	1 133	1 818
Dividends received		5 898	6 432
Net result, listed equities and participations	2	22 967	8 139
Net result, non-listed equities and participations	3	4 283	3 923
Net result, fixed-income assets		1 249	2 179
Net result, derivative instruments		224	–162
Net result, exchange gain/loss		–6 471	8 687
Commission expenses, net	4	–281	–264
Total operating income		29 002	30 752
Operating expenses			
Personnel expenses	5	–134	–131
Other administrative expenses	6	–84	–86
Total operating expenses		–218	–217
NET RESULT FOR THE YEAR		28 784	30 535

Balance Sheet

Amounts in SEK million	Note	31 December 2017	31 December 2016
ASSETS			
Equities and participations			
Listed	7	155 585	147 559
Non-listed	8	55 483	54 239
Bonds and other fixed-income assets	9	129 978	119 424
Derivative instruments	10	2 647	2 745
Cash and bank balances		2 810	2 328
Other assets	11	267	62
Prepaid expenses and accrued income	12	1 763	1 802
TOTAL ASSETS		348 533	328 159
FUND CAPITAL AND LIABILITIES			
Liabilities			
Derivative instruments	10	1 490	3 178
Other liabilities	13	511	17
Deferred income and accrued expenses	14	601	442
Total liabilities		2 602	3 637
Fund capital	15		
Fund capital at beginning of year		324 522	300 624
Net payments to the national pension system		-7 375	-6 637
Net result for the year		28 784	30 535
Total fund capital		345 931	324 522
TOTAL FUND CAPITAL AND LIABILITIES		348 533	328 159
Pledged assets, contingent liabilities and commitments	16		
Other assets pledged and comparable collateral		4 904	3 957
Commitments		25 785	25 453

Accounting and valuation principles

The annual report shall be prepared in accordance with the “Swedish National Pension Funds Act (2000:92)” and implemented in line with generally accepted accounting principles, on the understanding that the assets in which the Fund’s capital is invested shall be booked at market value. On this basis, the First to Fourth AP Fund have drafted and implemented joint accounting and valuation principles, as applied and summarised below.

The AP Funds’ accounting and valuation principles are being gradually adjusted to comply with the international IFRS accounting standard. Since the IFRS standard is currently undergoing extensive revision, this adjustment process has focused on the IFRS 7 and IFRS 13 information requirement. Full compliance with the IFRS standard would not essentially affect the reported net result and capital assets. The Second Swedish National Pension Fund fulfils the requirements for definition as an investment company in compliance with IFRS 10. Compared with the current IFRS standard, the only significant difference is that no cash flow analysis has been drawn up.

Transaction-date accounting

Transactions in securities and derivative instruments on the money and bond market, equities market and currency market are reported in the balance sheet on the transaction date, which is to say the date on which the significant rights and thereby risks are transferred between parties. The claim on or debt to the other party, between transaction date and settlement day, is reported under Other assets or Other liabilities. Other transactions, especially transactions involving non-listed equities, are reported in the balance sheet as per settlement day, in line with generally accepted market practice.

Net accounting

Financial assets and liabilities are net accounted in the balance sheet when there is a legal right of set-off and an intention to effect a net payment or to liquidate the asset and pay the liability simultaneously.

FX conversion

Transactions in foreign exchange are converted into Swedish kronor at the rate applied on the transaction date. On the balance sheet date, assets and liabilities in foreign currency are converted into Swedish kronor at closing day rates. Changes in the value of assets and liabilities in foreign currency are separated into that part attributable to the change in value of the asset or liability, and that part attributable to the change in the exchange rate. The exchange rate differential arising due to the change in the exchange rate is reported in the income statement under Net result, exchange gain/loss.

Equities in subsidiaries/associated companies

In compliance with the Swedish National Pension Funds Act, equities in subsidiaries/associated companies are recorded at their fair value. Fair value is determined by the same methods applied to non-listed equities and participations. There is no requirement to draw up consolidated financial statements.

Valuation of financial instruments

All Fund investments are calculated at their fair value, whereby realised and unrealised changes in value are reported in the income statement. Consequently, realised and unrealised gains/losses per asset class are included under Net result. In cases where reference below is made to the selected index supplier, refer to page 16 for information about current indices. For a description of how fair value is determined for the Fund’s numerous investments, see below.

Listed equities and participations

In the case of equities and participations traded on a regulated market or trading platform, fair value is based on the official market rate applied at the balance sheet date, according to the Fund’s selected index supplier, often the average market rate. Holdings not included in the index are valued at the listed rates observable on an active market. Commissions paid are taken up as income under Net result, listed equities.

Non-listed equities and participations

As regards equities and participations not traded on a regulated market or trading platform, fair value is based on the valuation made by the counterparty or other external party. This valuation is updated once the new valuation has been received and adjusted for eventual cash flows up to the end of the accounting period. In cases where the Fund has good reason to believe that the value assigned by the fund administrator is incorrect, the received value is adjusted.

The valuation of non-listed participations shall follow IPEV (International Private Equity and Venture Capital Valuation) Guidelines or similar valuation principles, first and foremost being based on transactions with third parties, although other valuation techniques may also be employed.

The valuation of non-listed real-estate equities is based on the material value method, in as far as the equity has not been the subject of transactions on a resale market. Deferred tax liabilities relating to holdings in non-listed real-estate companies have been determined at the value applied to the actual property transactions, as distinct from the value reported in the accounts of the real-estate companies.

Bonds and other fixed-income assets

For bonds and other fixed-income assets, fair value is based on the official market rate (usually the bid rate) applied on the balance sheet date, according to the Fund's selected index supplier. Holdings not included in the index are valued at the listed rates observable on an active market. In cases where such instruments are not traded on an active market, and where no reliable listed market rates are available, the instrument shall be valued with the support of generally accepted theoretical models, whereby cash flows are discounted according to an appropriate valuation scale.

Interest calculated according to the effective interest method, based on accrued acquisition value, is reported as interest income. The accrued acquisition value is the net present value of future payments, where the discount rate is the compound interest at the time of acquisition. This means that premiums or discounts acquired are accrual accounted over the security's remaining term or until the next adjustment in the interest rate, and are reported as interest income. Changes in value arising from adjustments to interest rates are reported under Net result, fixed-income assets, while changes in value arising from FX gains/losses are reported under Net result, exchange gain/loss.

Derivative instruments

Where derivative instruments are concerned, fair value is based on their listed rates at year-end. In cases where such instruments are not traded on an active market, and where no reliable listed market rates are available, the instrument shall be valued with the support of generally accepted theoretical models, where input data consists exclusively of observable market data.

Derivative contracts with a positive market value on the balance sheet date are reported as investment assets, while transactions with a negative market value are reported as liabilities. Changes in value arising from FX gains/losses are reported in the income statement under Net result, exchange gain/loss, while other changes in value are reported under Net result, derivative instruments. The difference arising between the forward rate and the spot rate on exchange forwards is straight line accounted over the term of the forward contract, and is reported as interest.

Buy-backs

In a true buy-back transaction, also known as a repurchase agreement, the asset sold is still reported in the balance sheet and the payment received is reported as a liability. The security sold is reported as a pledged asset among memorandum items in the balance sheet. The difference between spot payment and forward rate is accrual accounted over the term and reported as interest.

Securities lending

Securities on loan are reported in the balance sheet at their fair value, while premiums received are reported as interest income in the income statement. Collateral received for securities lent consists of securities and/or cash. In cases where the Second Swedish National Pension Fund has rights of disposal over the cash received as collateral, this is reported in the balance sheet as an asset and a corresponding liability. In cases where the Fund lacks these rights of disposal, collateral received is reported not in the balance sheet, but separately, under Pledged assets, contingent liabilities and commitments. The net worth of securities on loan and their collateral is also reported under this heading.

Items entered directly against Fund capital

Contributions to and disbursements from the pension system are entered directly against Fund capital.

Commission expenses

Commission expenses are reported in the income statement as a deduction under Operating income. These comprise direct transaction costs such as custodial expenses and fixed fees to external fund managers, as well as fixed fees for listed funds. The performance-based fee, which is paid out if the fund manager attains a return on investment in excess of the agreed level, where profit-sharing is applied, is reported as a deductible item under net result per asset class in the income statement.

Management fees paid for non-listed equities and participations, where reimbursement is permitted prior to profit sharing and is deemed likely, are reported as acquisition expenses and are therefore included in the unrealised result. In other cases, they are reported as commission expenses.

Operating expenses

All expenses incurred, excluding brokerage commissions, performance-based fees to external fund managers and custodial expenses, are reported under Operating expenses. Investments in equipment and in-house developed and externally purchased software are booked on current account.

Tax

The Second Swedish National Pension Fund is exempt from all income tax on investments in Sweden. The tax some countries levy on dividends, as well as withholding tax, is net accounted in the income statement under respective income classes.

As of 2012, the Second Swedish National Pension Fund became VAT registered. Consequently, VAT is now liable on services charged outside Sweden. The Fund is therefore not entitled to recover invoiced VAT. The cost of VAT is included with the respective cost item.

Amounts cited are in millions of kronor (SEK m), unless otherwise stated.

Notes to the income statement and balance sheet

1 Net interest income/expense

Amounts in SEK million	Jan–Dec 2017	Jan–Dec 2016
Interest income		
Bonds and other fixed-income securities	3 097	3 262
Derivative instruments	706	551
Other interest income	99	81
Total interest income	3 902	3 894
Interest expenses		
Derivative instruments	–2 755	–2 054
Other interest expenses	–14	–22
Total interest expenses	–2 769	–2 076
Net interest income	1 133	1 818

2 Net result, listed equities and participations

Amounts in SEK million	Jan–Dec 2017	Jan–Dec 2016
Net result, listed equities and participations	23 043	8 242
less brokerage commission	–76	–103
Net results, listed equities and participations	22 967	8 139

3 Net result, non-listed equities and participations

Amounts in SEK million	Jan–Dec 2017	Jan–Dec 2016
Capital gains, net	2 097	1 492
Unrealised changes in value	2 186	2 431
Net result, non-listed equities and participations	4 283	3 923

Reporting of external portfolio management fees for non-listed assets takes place in accordance with two different principles, depending on whether the underlying management agreement allows for repayment before profit sharing for future profitable sales or not. In cases where the contract allows for such a repayment, the fees are reported as part of the acquisition value of the asset and are charged to the unrealised net results for non-listed assets. Repaid management fees therefore have a positive effect on unrealised results. In cases where the contract does not allow refund, fees paid are expensed directly under Commission expenses.

During the year a total of SEK 264 (204) million has been paid in management fees in respect of non-listed assets, of which SEK 261 (198) million admits repayment according to the above principle. During the year, SEK 209 (171) million was also repaid and the unrealised result for non-listed equities and participations have had a net negative effect of SEK 52 (–27) million. Paid management fees where the contract does not allow repayment amounted to SEK 3 (6) million and are recognised as commission expenses, see note 4, Commission expenses, below.

4 Commission expenses, net

Amounts in SEK million	Jan–Dec 2017	Jan–Dec 2016
External portfolio management fees, listed assets	238	219
External portfolio management fees, non-listed assets	3	6
Other commission expenses including custodial expenses	40	39
Total commission expenses	281	264

Commission expenses do not include performance-based expenses. During the year performance-based expenses amounted to SEK 215 (139) million and reduced the net result for respective asset classes.

Note 4 contd.

External mandates as per 31 December 2017, SEK million

Mandate		Average assets under management 2017	Market value 31 December 2017*	% of Fund capital	External management expense
External discretionary mandates					
Equity mandates					
Active management					
MFS	Global equities	5 670	5 948		
APS	Chinese A shares	2 515	2 896		
Cephei	Chinese A shares	2 179	2 666		
UBS	Chinese A shares	1 868	2 709		
Total external discretionary mandates		12 232	14 219	4	76
Investments in listed external funds					
Equity funds		10 504	10 997		58
Fixed-income funds		13 009	12 658		81
GTAA funds		1 561	–		23
Total investments in listed external funds		25 074	23 655	7	162
Investments in non-listed private equity funds and real-estate funds		20 077	20 425	6	3
TOTAL CAPITAL ASSETS UNDER EXTERNAL MANAGEMENT AND MANAGEMENT EXPENSES		57 383	58 299	17	241

* Market value including allocated liquidity, derivative instruments and accrued interest.

5 Personnel

	2017			2016		
	Total	Men	Women	Total	Men	Women
Number of employees						
Average number of employees	66	43	23	67	44	23
Number of employees, 31 December	67	44	23	66	44	22
Number of persons in Executive Management Group, 31 December	6	4	2	7	5	2

Personnel costs in SEK thousands, 2017	Salaries and remuneration	Variable remuneration	Pension costs*	Social costs incl. special employer's contribution	Total
Chair of the Board	115	–	–	37	152
CEO	3 739	–	1 454	1 546	6 739
Board of Directors, excluding Chair	506	–	–	132	638
Executive Management Group excl. CEO					
Chief Investment Officer (CIO)	2 912	–	984	1 175	5 071
Head of IT, Business and Financial Control	1 685	–	774	717	3 176
General Counsel	2 254	–	675	920	3 849
Head of Communication & HR	1 771	–	679	608	3 058
Head of Performance & Risk Management	1 720	–	595	685	3 000
Other employees	54 201	5 603	21 202	23 591	104 597
Total	68 903	5 603	26 363	29 411	130 280
Other personnel costs					3 858
Total personnel costs					134 138

Personnel costs in SEK thousands, 2016	Salaries and remuneration	Variable remuneration	Pension costs*	Social costs incl. special employer's contribution	Total
Chair of the Board	115	–	–	37	152
CEO	3 797	–	1 500	1 559	6 856
Board of Directors, excluding Chair	507	–	–	143	650
Executive Management Group excl. CEO					
Chief Investment Officer (CIO)	3 025	–	843	1 176	5 044
Head of IT, Business and Financial Control	1 678	–	782	717	3 177
Chief Investment Strategist (CIS)	2 438	–	664	929	4 031
General Counsel	2 235	–	577	760	3 572
Head of Communication & HR	1 785	–	642	611	3 038
Head of Performance & Risk Management	1 729	–	484	661	2 874
Other employees	51 663	5 447	18 788	22 385	98 283
Total	68 972	5 447	24 280	28 978	127 677
Other personnel costs					3 547
Total personnel costs					131 224

* The item Pension costs includes pension premiums paid for salary swap.

Board of Directors

Fees and other remuneration paid to the Board are determined by the Swedish Government. This remuneration is paid yearly in the following amounts: to the Chair, SEK 100 000; to the Vice Chair, SEK 75 000 and to each of the other directors, SEK 50 000. The Swedish Government has determined that remuneration totalling SEK 100 000 may be paid for committee work carried out by board members. No remuneration has been paid to board members for their work on the Remuneration Committee. Work on the Risk Committee is remunerated as follows: SEK 30 000 to the Chair and SEK 25 000 to the other members. Work on the Audit Committee is

remunerated as follows: SEK 20 000 to the Chair and SEK 15 000 to the other directors.

Other directorships held by Members of the Board

See page 110.

CEO

In the CEO's contract of employment, the Fund undertakes to pay pension benefits and health insurance up to a pensionable age of 65 years, in the form of an annual premium corresponding to 30 per cent of the gross salary.

Where the contract of employment is terminated by the Fund, the CEO is entitled to a severance payment equivalent to eighteen months' salary, in addition to salary paid during the six month period of notice, less income from an eventual new appointment. The severance payment is calculated according to the cash monthly salary received at the end of the notice period. Benefits received by the CEO amount to SEK 7 (7) thousand.

Executive Management Group

In addition to salaries, other remuneration and pension contributions, the Executive Management Group has received benefits as per the following disclosure: Chief Investment Officer (CIO), SEK 66 (66) k; Head of IT, Business and Financial Control, SEK 0 (0) k; Chief Investment Strategist (CIS), SEK – (6) k; General Counsel, SEK 1 (0) k; Head of Communication & HR, SEK 0 (0) k and Head of Performance and Risk Management, SEK 1 (0) k. Members of the Fund's Executive Management are not covered by the terms of the programme for performance-based variable remuneration. Senior executives come under the terms of the retirement benefit agreement between BAO (the Employers' Organisation of the Swedish Banking Institutions) and JUSEK/CR/CF (SACO), the Swedish Confederation of Professional Associations. Swedish Government guidelines specify six months' notice and eighteen months' severance pay for senior executives. One senior executive of AP2, who was appointed before these Government guidelines came into force, is entitled to 12 months' notice without severance pay. These terms have not been renegotiated, as it would incur higher costs for the Fund.

Salary swap

All employees are offered the opportunity to swap part of their salary for an additional pension benefit.

Variable remuneration

The Board of Directors has approved a programme for variable remuneration in line with Swedish Government guidelines. AP2's incentive programme comprises all staff apart from the CEO and other members of the executive management and the compliance function. This incentive programme means that all those covered are entitled to a maximum of two months' salary in variable remuneration. The programme is linked to long-term goals. This variable remuneration may only be paid out when the Fund reports a positive return. The extent of the programme is presented on the Fund's [website](#).

Drafting and decision process

The remuneration paid to the Board of Directors is determined by the Swedish Government. The Board determines the CEO's salary and the guidelines applied in remunerating the Fund's senior executives.

Government guidelines

For several years, AP2 has participated in the Willis Towers Watson salary and benefits survey. The purpose of this survey is to report on the market rate for salaries and benefits paid to different staff categories, based on data supplied by the participating companies. AP2 has used this statistical data to compare remuneration levels for all its employees. In 2017, the levels of remuneration provided by the Fund were compared with some 15 other private and state players in the financial sector, including Swedish pension fund AMF, the other AP Funds and Kammarkollegiet (Swedish Legal, Financial and Administrative Services Agency). The Fund's remuneration policy is based on the idea that the level of remuneration should be close to the median for the reference group employed in the Willis Towers Watson salary and benefits survey.

The Board considers that the levels of remuneration paid to senior executives, as well as to other members of the Fund's staff, are reasonable, well balanced, competitive and appropriate, featuring clearly defined upper limits and contributing to solid business ethics and a healthy organisational culture. These levels of remuneration are not salary-inflationary in

relation to comparable institutions, but are moderate in character and fall well within the parameters prescribed by the Board concerning staff remuneration. The Board is satisfied that the Fund is in compliance with Swedish Government guidelines on remuneration, apart from the above mentioned exception regarding the period of notice. Nevertheless, the combined costs incurred in connection with a dismissal are well within the limits defined in the Swedish Government guidelines. For more information, see the Fund's [website](#).

Other

In compliance with Swedish legislation, trade unions are free to operate at AP2. The Fund has no employees under the age of 18.

6 Other administration expenses

Amounts in SEK million	Jan–Dec 2017	Jan–Dec 2016
Rental expenses	6	5
Information and IT expenses	58	58
Purchased services	10	12
Other expenses	10	11
Total other administration expenses	84	86
Fees to auditors		
Audit assignments		
PwC	0.92	0.91
Accounting activities in addition to audit assignments		
PwC	–	–
Total remuneration to PwC	0.92	0.91

7 Equities and participations, listed

Amounts in SEK million	31 December 2017	31 December 2016
Swedish equities	32 600	35 231
Foreign equities	111 988	100 010
Participations in foreign funds*	10 997	12 318
Total listed equities and participations	155 585	147 559
* of which participations in mixed funds	–	1 577

Like others engaged in long-term asset management, AP2 is also active in securities lending. This lending takes place to counterparties that have high credit ratings and that provide guarantees corresponding to about 105 per cent of the market value of the pledged securities.

In 2017, total income from pledged securities amounted to SEK 30 million. This income made a positive contribution to the Fund's relative return and is reported as interest income in the income statement. The guarantees secured for securities on loan are reported in Note 16.

The 20 largest Swedish and foreign shareholdings, by value, are listed on pages 102–104.

A complete list of Swedish and foreign holdings may be found on the Fund's [website](#).

8 Equities and participations, non-listed

Amounts in SEK million	31 December 2017	31 December 2016
Equities in Swedish associated companies	15 218	13 771
Equities in foreign subsidiaries and associated companies	18 687	18 744
Other non-listed Swedish companies	0	0
Other non-listed foreign companies	21 578	21 724
Total non-listed equities and participations	55 483	54 239

When calculating the share of private equity funds in relation to the statutory five-per cent limit, this amounted to 4.74 per cent on 31 December 2017. The share of listed securities in six private equity funds exceeds 50 per cent, and these are therefore not defined as non-listed assets in the limit follow-up.

Amounts in SEK million	Corp. ID No.	Registered office	No. of equities	Holding, %	31 Dec 2017 Fair value	31 Dec 2016 Fair value	Equity	Result
Equities in Swedish associated companies								
Vasakronan Holding AB	556650-4196	Stockholm	1 000 000	25	15 218	13 771	51 377*	9 269*
Equities in foreign subsidiaries and associated companies								
Chaptwo S.à.r.l.		Luxemburg		100	1 918	2 050		
Lewis & Clark Timberlands LLC		USA		24	1 052	1 345		
Molpus Nordic Woodlands		USA		99	590	661		
TIAA-CREF Global Agriculture LLC		USA		23	3 552	3 870		
TIAA-CREF Global Agriculture II LLC		USA		25	2 955	2 400		
U.S. Office Holdings L.P.		USA		41	4 516	5 000		
U.S. Core Office APTWO L.P.**		USA		99	3 700	3 418		
U.S. Office APTWO JV II L.P.***		USA		99	404	–		
Total equities in foreign subsidiaries and associated companies					18 687	18 744		

* Refers to figures published as per 31 December 2017.

** Holding company with a 41 per cent participation in US Core Office Holding L.P. and minority participations in other properties, in partnership with NPS and Tishman Speyer.

*** Holding company with minority participations in other properties, in partnership with NPS and Tishman Speyer.

Belopp i mnkr	Registered office	Holding, %	31 Dec. 2017 Acquisition value	31 Dec. 2016 Acquisition value
Other non-listed Swedish companies				
EQT Northern Europe KB	Stockholm	1	53	53
Swedstart Tech KB	Stockholm	3	3	3
Five largest shareholdings in other non-listed foreign companies				
Pathway Private Equity Fund IXC	USA	99	951	1 059
Pathway Private Equity Fund IXB	USA	99	789	860
Teays River Investments LLC	USA	7	665	665
CVC European Equity Partners VI	Jersey	1	578	397
TIAA European Farmland Fund	Cayman Islands	20	548	562

A complete list of Swedish and foreign non-listed shareholdings is available on the Fund's [website](#).

Amounts in SEK million	31 December 2017	31 December 2016
	Fair value	Fair value
Swedish State	7 746	7 685
Swedish municipalities	226	148
Swedish mortgage institutions	18 461	20 259
Other Swedish issuers		
Financial companies	12 089	9 171
Non-financial companies	1 259	1 312
Foreign states	30 430	23 465
Other foreign issuers	59 218	57 380
Deposits	549	4
Total	129 978	119 424
Other bonds	115 732	104 197
Non-listed loans	1 066	1 104
Participations in foreign fixed-income funds	12 631	14 119
Deposits	549	4
Total	129 978	119 424

10

Derivate instruments

Amounts in SEK million	31 December 2017		31 December 2016	
	Fair value, Positive	Fair value, Negative	Fair value, Positive	Fair value, Negative
Equities-linked instruments				
Forward contracts	–	0	295	6
Total	–	0	295	6
of which cleared		0	295	6
Index-linked instruments				
Options, held	–	–	–	11
Options, pledged	–	–	13	–
FRA/Futures	0	9	33	68
Swaps	–	37	1	21
Total	0	46	47	100
of which cleared	0	0	45	79
Currency-linked instruments				
Options, held	61	13	6	–
Options, pledged	–	25	–	4
Forward contracts	2 586	1 406	2 397	3 068
Total	2 647	1 444	2 403	3 072
of which cleared	–	–	–	–
Total derivate instruments	2 647	1 490	2 745	3 178

Derivative positions with a negative value amounting to SEK 37 million have a longer duration than 12 months. These positions refer to swap contracts which are due in 2031 or 2032.

Pledged put options are part of the Fund's strategy for reducing total risk. The net position of put options features a limit on maximum loss. In the case of currency options sold, AP2 is always required to meet the commitments specified in the options contract, i.e. once the Fund has sold a currency option, the buyer is entitled to utilise the option, whether favourable or not in comparison to the current rate. Where other put options are concerned, the Fund is not subject to any special delivery requirements.

Use of derivative instruments

Derivative instruments are the primary means of hedging the Fund's portfolios. They also contribute to more efficient portfolio management, create added value and reduce risk. AP2's employment of derivative instruments is governed according to the Fund's business plan. Restrictions include the injunction that call options and forward contracts may only be issued if adequate collateral is available in the form of holdings in underlying assets. During 2017, derivative instruments have principally been utilised in the following areas:

- Foreign exchange derivatives – forward contracts and options – for managing the Fund's FX exposure.
- Equity derivatives – mainly standardised equity-index forward contracts – for efficient rebalancing of the portfolio and when adopting positions in tactical asset allocation.

- Interest derivatives – mostly standardised interest forwards and interest rate swaps – for rebalancing, tactical asset allocation and managing the Fund's interest risk. Limited utilisation of interest options to position the Fund in respect of interest risk.
- Structured derivatives – the derivate is used to create exposure to market fluctuations that are not available in traditional equities, interest or currency derivatives.
- The adopting of positions within the framework of the Fund's GTAA mandates, as well as alternative risk premium mandates, is handled with the help of derivatives. These mandates are able to act freely with the help of short and long positions in the permitted asset classes.

Exposure in derivative instruments is subject to ongoing monitoring and analysis. Equity and interest derivatives are traded mainly on standardised markets in cleared products, which is why counterparty risks are limited to the clearing institute. Trading in currency and credit market derivative instruments is not standardised. Consequently, both counterparty and delivery risks exist with respect to the Fund's counterparties.

The CEO approves and determines limits for those counterparties the Fund utilises for non-standardised products and the exposure is subject to ongoing monitoring. For OTC trading, the Fund requires standardised contracts, such as ISDA contracts and to a greater extent CSA, which regulates the security between counterparties.

11 Other assets

Amounts in SEK million	31 December 2017	31 December 2016
Incoming payments, unsettled transactions	261	56
Other receivables	6	6
Total	267	62

12 Prepaid expenses and accrued income

Amounts in SEK million	31 December 2017	31 December 2016
Interest income accrued	1 449	1 339
Dividends accrued	171	337
Restitutions	130	113
Other prepaid expenses and accrued income	13	13
Total	1 763	1 802

13 Other liabilities

Amounts in SEK million	31 December 2017	31 December 2016
Outgoing payments, unsettled transactions	194	2
Accounts payable	5	5
Other liabilities	312	10
Total	511	17

14 Prepaid income and accrued expenses

Amounts in SEK million	31 December 2017	31 December 2016
Accrued external management fees	99	39
Accrued interest expenses on currency forwards	471	370
Other accrued expenses	31	33
Total	601	442

15 Fund capital

Amounts in SEK million	31 December 2017	31 December 2016
Fund capital at beginning of year	324 522	300 624
Net inflows to the national pension system		
Pension contributions received	66 850	64 174
Pension disbursements to the Swedish Pensions Agency	-73 999	-70 595
Transfer of pension entitlements to EC	-2	-1
Adjustment of pension entitlements regarding previous years	2	1
Administration contribution to the Swedish Pensions Agency	-226	-216
Total payments to the national pension system, net	-7 375	-6 637
Net result for the year	28 784	30 535
Closing Fund capital	345 931	324 522

16 Pledged assets, contingent liabilities and commitments

Amounts in SEK million	31 December 2017	31 December 2016
Other pledged assets and comparable collateral		
Securities on loan for which guarantees have been secured in the form of securities and cash*	2 814	3 598
Securities pledged in connection with exchange-cleared derivatives	421	359
Securities pledged in connection with OTC derivatives (CSA agreement)**	1 669	–
	4 904	3 957
Commitments		
Commitments regarding future payments, non-listed holdings	21 285	20 953
Subscription commitments, certificates	4 500	4 500
	25 785	25 453

* Guarantees secured for securities on loan amount to SEK 3 005 (3 845) million.

** The book value of liabilities relating to cash collateral in respect of OTC derivatives amounts to SEK 301 (–) million. Collateral received in the form of securities for OTC derivatives SEK 380 (495) million.

17 Financial instruments, price and valuation hierarchy

Valuation of Fund capital – Market-listed assets

The great majority of the Fund's assets are market-listed, which means that they are traded on an active market at rates that reflect actual and regular market transactions. AP2's market-listed assets are valued on a daily basis at listed market rates and comprise equities, bonds, derivatives and foreign exchange (FX).

In the case of so-called OTC derivatives, the appraisal is based either on theoretical modelling or on a valuation by an outside party. Where the Fund's holdings in exchange forwards, interest swaps and currency options are concerned, the appraisal is based on theoretical modelling, where at present the only subjective elements are the choice of interest curves, volatility curves and the method adopted for calculating and forecasting future values (interpolation and extrapolation). The same methods are applied for deposits, short-dated certificates and similar instruments.

When it comes to other OTC derivatives, the appraisal is handled exclusively by external parties, without subjective input from the Fund. At year end 2017, the Fund's portfolios contained only a few outstanding structured OTC derivatives.

At times when the market lacks the liquidity necessary for market-listed papers, a higher degree of subjectivity is required in the valuation process. At such times, the market exhibits sharp differences in bid and offer rates, leading even to marked differences between one market player and another. At times like these, AP2 adopts a conservative approach to appraisal. Should an asset be deregistered, the market rates listed by alternative trading centres shall be taken into consideration. In such instances, each individual security is appraised separately.

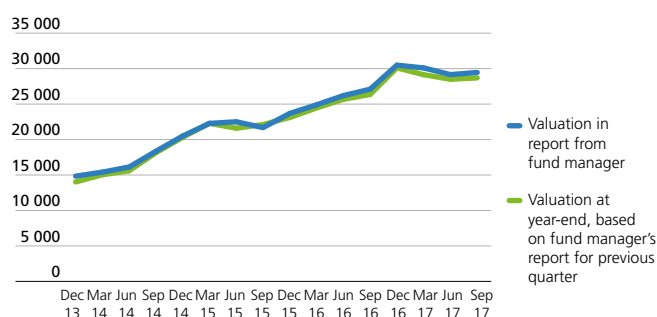
Valuation of Fund capital – Non-listed assets

For assets not valued on an active market, various appraisal techniques are applied in the calculation of fair value at the valuation date.

Fair value is deemed to be the market rate at which a transaction between informed and mutually independent parties can be completed. In the case of AP2, these non-market-listed assets consist of non-listed

Note 17 contd.

Validation of values with deferred reporting, SEK million



An analysis of the impact on the result arising from the time-lag reveals that AP2's valuations in its official annual accounts are in all essential respects lower than the values cited in the final report submitted by fund managers.

real-estate assets (eleven per cent of the total portfolio) and private equity funds (almost five per cent of the total portfolio).

Investments in non-listed private equity funds and real-estate funds are valued in accordance with the IPEV (International Private Equity and Venture Capital Valuation) Guidelines or similar valuation principles, and shall be based first and foremost on transactions with third parties, although other valuation techniques may also be employed.

Fund managers primarily use discounted cash flows, the material value method and multiple valuation in order to calculate fair market values. Valuation of holdings is based on the most recent interim reports received from the individual fund managers. Interim reports are normally available within 90 days of the last quarterly financial statement. This means that AP2's holdings valued at year-end 2017 were based mainly on the appraisal as per 30 September 2017, adjusted for in- and outflows during the fourth quarter. This method of appraisal has been applied consistently by the Fund right from the start.

An analysis of the relative impact of this time-lag since December 2013 reveals that the AP Fund's valuation, as shown in the official year-end accounts, has in all essential respects been lower than the value declared in the final report from the fund managers. A third party assessment of market growth during the final quarter of 2017 confirms that private equity funds in the Fund's key geographic markets enjoyed continuing positive growth during the final quarter.

Fair value

Fair value is defined as the amount for which an asset could be sold or a debt settled by means of an orderly transaction between market players on the valuation date.

For this reason, the Fund's holdings are sorted at three different levels and classified according to the input data used for the appraisal. AP2 classifies its assets at fair value as per the following hierarchy.

Fair value hierarchy, SEK million

	31 December 2017			Total fair value
	Level 1	Level 2	Level 3	
Equities and participations, listed	144 588	10 997	–	155 585
Equities and participations, non-listed	–	–	55 483	55 483
Bonds and other fixed-income assets	114 256	14 656	1 066	129 978
Derivative assets	0	2 647	–	2 647
Derivative liabilities	0	–1 490	–	–1 490
Financial assets and liabilities, valued at fair value	258 844	26 810	56 549	342 203*

	31 December 2016			Total fair value
	Level 1	Level 2	Level 3	
Equities and participations, listed	135 082	12 477	–	147 559
Equities and participations, non-listed	–	–	54 239	54 239
Bonds and other fixed-income assets	103 949	14 371	1 104	119 424
Derivative assets	340	2 405	–	2 745
Derivative liabilities	–86	–3 092	–	–3 178
Financial assets and liabilities, valued at fair value	239 285	26 161	55 343	320 789*

* The difference compared to reported Fund capital refers to items unrelated to financial investments, such as interim items and other assets/liabilities.

- Level 1:** Financial instruments traded on an active market. The market is deemed active if it features listed rates that are subject to regular update at a higher frequency than once weekly, and if these rates are employed unadjusted at closing.
- Level 2:** Financial instruments traded on a market not deemed active, but that features listed rates that are employed unadjusted at closing or observable input data that is regularly updated for indirect valuation based on generally accepted models.
- Level 3:** Financial instruments that are valued on the basis of a not insignificant amount of non-observable data, or that otherwise cannot be classified as Level 1 or Level 2.

Level 3 primarily features the Fund's holdings in private equity funds and non-listed real estate, where the appraisal is not based on observable market data. Changes in value are primarily reported in the income statement under Net result, non-listed equities and participations.

Change during 2017 in Level 3, SEK million

	Equities and participations, listed	Equities and participations, non-listed	Bonds and other fixed-income assets	Total
Value brought forward, January 2017	0	54 239	1 104	55 343
Purchases	–	3 934	0	3 934
Divestments	–	–886	–38	–924
Changes in value	0	–1 804	0	–1 804
Reclassifications	–	–	–	–
Total	0	55 483	1 066	56 549

100 per cent of the changes in value are unrealised as per year-end.

Note 17 contd.

Change during 2016 in Level 3, SEK million

	Equities and participations, listed	Equities and participations, non-listed	Bonds and other fixed-income assets	Total
Value brought forward, January 2016	0	49 205	3 000	52 205
Purchases	–	8 818	1 459	10 277
Divestments	–	–8 724	–3 366	–12 090
Changes in value	0	4 940	11	4 951
Reclassifications	–	–	–	–
Total	0	54 239	1 104	55 343

100 per cent of the changes in value are unrealised as per year-end.

Sensitivity analysis, non-listed assets

Timberland and farmland

Growth in the value of timberland and farmland is largely determined by the demand for forest and agricultural raw materials. The value of timberland and farmland can nevertheless vary considerably within the same region, as can the correlation with raw material prices. The operational focus of the agricultural asset, the quality of the land, the size of the forest asset, the long-term felling plan, the infrastructure, topography and various macroeconomic factors are all parameters that have a significant impact on the value of the asset.

In the long run, the value of timberland and farmland is mainly determined by the anticipated income it can generate, combined with the effect of interest levels. The value of timberland and farmland tends to rise when interest rates are low and raw material prices are high. Conversely, the value of land tends to fall as interest rates rise, a consequence of the discounting of anticipated future income from cultivation of the land. Higher interest rates lead to a decline in the price of forest and agricultural products, which means reduced revenues for operators and, eventually, a reduction in the value of the land. This said, however, the grain price needs to fall fairly dramatically over an extended period to have any really significant effect on land values.

Private equity funds

The valuations of the individual companies in the portfolio of a private equity fund are determined largely by the following factors:

- Profitable growth through increased sales and improved margins. This is achieved through, for example, increased market shares, development or new development of products and services, geographic expansion, operational improvements, acquisitions, consolidation, etc.
- Multiple expansion, which is achieved by the company achieving higher quality or through the development of the listed market.
- Reduced debt.

Guidelines pertaining to the valuation of fair value for this type of investment feature valuation models which in many cases include valuations of listed companies in relevant benchmark groups. Consequently, the valuation of these portfolio companies is affected by the publicly-traded market, but not to the same extent, and always with a three-month shift in time as valuation takes place quarterly. In AP2's experience, most fund managers generally adopt a conservative approach in their valuations, something that is especially apparent in markets that feature rapid and sharp rises in share prices.

Traditional real estate

Although many different factors can affect the performance and financial status of real-estate companies, the growth in the value of the companies' real estate portfolios constitutes the greatest risk and has the greatest impact on their net result. The market value of real estate is affected by changed assumptions in rental and vacancy levels, as well as operating costs and dividend yield requirements. The assumptions made when making these valuations are based on the economic health of the markets where these properties are located. Economic growth is assumed to generate increased demand for commercial premises, thereby causing a decline in vacant leases and creating opportunities to increase market rents. The single most important factor is the dividend yield requirement.

Concerning AP2's holdings in traditional real-estate companies, the combined effect on the Fund's share in profits of a planned change in the direct yield requirement of +/- 0.25% on companies' reported pre-tax results is estimated at SEK –2.2 billion and SEK +2.5 billion respectively.

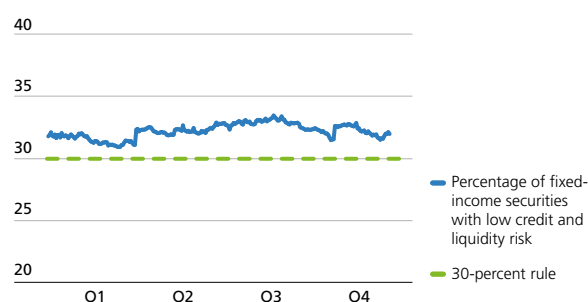
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Financial risks

The liquidity risk is limited, among other things, by the 30-per cent rule (external investment regulations for AP1-AP4, which specify that a minimum 30 per cent of the funds' total capital shall be invested in securities with a low credit and liquidity risk) and that no more than five per cent of the Fund's total assets may be invested in non-listed assets. During 2017, the Fund's share in securities with a low credit and liquidity risk was around 31–33 per cent. By year-end, its share of non-listed assets was 4.74 per cent. The liquidity risk on the liability side is very limited, consisting of derivative liabilities.

For further risk data, see the section about risk management, pages 74–79.

Liquidity risk, %



Financial assets and liabilities net accounted in balance sheet or subject to right of set-off

31 December 2017	Gross amount	Net-accounted amount in balance sheet	Net amount in balance sheet	Amount not net-accounted in balance sheet		Net amount post offset	Other*	Total in balance sheet
				Set-off of financial instruments per agreement	Collateral received/ provided			
ASSETS								
Derivatives	2 647	–	2 647	–466	–681	1 500	0	2 647
Total	2 647	–	2 647	–466	–681	1 500	0	2 647
LIABILITIES								
Derivatives	1 481	–	1 481	–466	–1 669	–654	9	1 490
Total	1 481	–	1 481	–466	–1 669	–654	9	1 490

31 December 2016	Gross amount	Net-accounted amount in balance sheet	Net amount in balance sheet	Amount not net-accounted in balance sheet		Net amount post offset	Other*	Total in balance sheet
				Set-off of financial instruments per agreement	Collateral received/ provided			
ASSETS								
Derivatives	2 403	–	2 403	–1 126	–495	782	342	2 745
Total	2 403	–	2 403	–1 126	–495	782	342	2 745
LIABILITIES								
Derivatives	3 093	–	3 093	–1 126	–	1 967	85	3 178
Total	3 093	–	3 093	–1 126	–	1 967	85	3 178

* Other instruments in the balance sheet that are not subject to right of set-off.

19 Related parties

This note is intended to clarify how AP2's result and financial position has been affected by transactions and accounts outstanding, including commitments, with related parties in compliance with the definitions cited in IAS 24.

Those defined as related parties to AP2 are companies in which the Fund controls at least 20 per cent of the voting rights (see associated companies, note 8), as well as the Fund's board members and executive management. Concerning salaries and remuneration to AP2's board members and executive management, see note 5.

Amounts in SEK million	31 December 2017	31 December 2016
Related parties, voting rights		
Vasakronan Holding AB, 25 per cent		
Interest income	9	147
Shareholders' contribution	–	3 000
Commitment on Vasakronan's behalf to purchase commercial paper in the company, on each occasion, to a maximum combined liquid amount of	4 500	4 500
Chaptwo S.à.r.l., 100 per cent		
Interest income	44	71
Shareholder loan including accrued interest	1 077	1 127
Shareholders' contribution during the year	–	93
Investment commitment	2 458	2 395

**The administration report, income statement, balance sheet and notes for 2017
have been approved by the Board of Directors.**

Gothenburg, 6 February 2018

Marie S. Arwidson
Chair

Jan Roxendal
Vice Chair

Ola Alfredsson

Jeanette Hauff

Ole Settergren

Johnny Capor

Kristina Mårtensson

Ulrika Boëthius

Christer Käck

Our audit report was submitted on 6 February 2018

Helena Kaiser de Carolis
*Authorised Public Accountant
Appointed by the Swedish Government*

Peter Nilsson
*Authorised Public Accountant
Appointed by the Swedish Government*

Auditor's Report

For the Second Swedish National Pension Fund, Corporate Identity Number 857209-0606

Report on the audit of the annual accounts

Opinion

We have audited the annual accounts of the Second AP Fund for 2017. The Fund's annual accounts are included in the printed version of this document on pages 63–99.

In our opinion, the annual accounts have been prepared in accordance with the Swedish National Pension Funds Act (2000:192) and present fairly, in all material respects, the financial position of the Second AP Fund as at 31 December 2017 and of its financial performance for the year then ending according to the Swedish National Pension Funds Act.

The statutory administration report is consistent with the other parts of the annual accounts.

We, therefore, recommend that the income statement and balance sheet be adopted.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities according to these standards are described in more detail in the section Auditor's responsibilities below. We are independent in relation to Second AP Fund according to generally accepted auditing standards in Sweden and have fulfilled, in general, within the meaning of professional ethical requirements according to these standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Other information than the annual accounts

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises pages 1–62 and 102–112 (but does not include the annual accounts and our auditor's report thereon).

Our opinion on the annual accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and the Managing Director

It is the Board of Directors and Managing Director who are responsible for the preparation and fair presentation of the annual accounts in accordance with the Law on Pension Funds. The Board of Directors and Managing Director are also responsible for the internal control they deem necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, the Board of Directors and Managing Director are required to assess the Fund's capacity to continue its operations. They are also to provide disclosures, as appropriate, of the circumstances regarding such assessments and as regards the application of the going concern basis of accounting, provided the Board of Directors and Managing Director do not intend to liquidate the Fund or cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities

Our responsibility is to obtain reasonable assurance as to whether the annual accounts and consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an Auditor's Report that includes our opinion. Reasonable assurance is a high level of assurance, but does not comprise a guarantee that an audit conducted in accordance with ISA and generally accepted auditing standards in Sweden will always identify material misstatements should they exist. Misstatements can arise from fraud or error and are considered to be material if, individually or taken together, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts.

As a part of the audit in accordance with ISA, we undertake professional judgment and maintain professional scepticism throughout the entire audit. In addition, we execute the following activities:

- We identify and assess the risks of material misstatement in the annual accounts, whether due to fraud or error, design and execute audit procedures based on, amongst other things, these risks, and obtain audit evidence which is sufficient and appropriate to provide a basis for our opinion. The risk of not identifying a material misstatement resulting from fraud is higher than one resulting from error, as fraud can include collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.
- We obtain understanding of the internal control of the company relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal controls.
- We evaluate the appropriateness of the accounting principles applied and the reasonability of the accounting estimates and related disclosures made by the Board of Directors and Managing Director.

- We reach a conclusion on the appropriateness of the Board of Directors' and Managing Director's application of the going concern basis of accounting in the preparation of the annual accounts. We are also to reach a conclusion, based on the audit evidence obtained, whether any material uncertainty exists related to such events or circumstances which can result in significant doubt as regards the Fund's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our Auditor's Report to the related disclosures in the annual accounts, or if such disclosures are inadequate, we are required to modify our opinion on the annual accounts. Our conclusions are based on the audit evidence obtained up to the date of our Auditor's Report. However, future events or circumstances may cause the Fund to cease to continue as a going concern.
- We evaluate the overall presentation, structure and content of the annual accounts and consolidated accounts, including the disclosures, and whether the financial reports represent the underlying transactions and events in a manner providing a true and fair presentation.

We are required to inform the Board of Directors regarding, amongst other matters, the planned scope of the audit and its focus and time schedule, as well as regards any significant observations made during the audit, including potential significant deficiencies in the internal control which we identify during our audit.

Report on other legal and regulatory requirements

Opinion

In addition to our audit of the annual accounts, we have also audited the inventory of the assets managed by the Second AP Fund. We have also audited to determine if there are any criticisms, in general, as regards the Board of Directors' and Managing Director's management of the Second AP Fund for 2017.

The audit has shown no reason to criticise the inventory of the assets or, in general, the administration.

Basis for opinion

We conducted our audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities according to those standards are described in more detail in the Auditor's responsibilities section below. We are independent in relation to the Second AP Fund according to generally accepted auditing standards in Sweden and have fulfilled, in general, within the meaning of professional ethical requirements according to these standards.

We believe that the audit evidence we have obtained is sufficient and appropriate as a basis for our opinion.

Responsibilities of the Board of Directors and Managing Director

It is the Board of Directors and Managing Director who has the responsibility for the accounts and for the administration of the Fund's assets according to the Law on Pension Funds.

The Board of Directors is responsible for the organisation of the Second AP Fund and for the administration of the Fund's activities of the Second AP Fund. This includes, amongst other things, the on-going assessment of the the Second AP Fund's financial situation and ensuring that the organisation of the Second AP Fund is designed in such a manner that the accounts, funds management and the Fund's activities are, in general, subject to satisfactory controls. The Managing Director is responsible for the day-to-day administration according to the Board of Directors' guidelines and instructions and for, amongst other things, the implementation of measures necessary to ensure that the Fund's accounting is executed in compliance with the applicable legislation and that the funds of the Second AP Fund are managed in a satisfactory manner.

Auditor's responsibilities

Our responsibility regarding the audit of the administration and, thereby, our opinion on discharge from liability, is to evaluate audit evidence in order to, with a reasonable degree of assurance on the basis of reasonable assurance, if there is any criticism of the Board of Directors' and Managing Directors' administration of the the Second AP Fund for financial year 2017.

Reasonable assurance is a high level of assurance but does not comprise a guarantee that an audit executed in accordance with generally accepted auditing standards in Sweden will always identify actions or negligence which can result in criticism.

As a part of an audit according to generally accepted auditing practice in Sweden, we exercise professional judgment and maintain a professional scepticism through the entire audit. The audit of the administration is based primarily on the audit of the accounts. Any additional audit procedures selected to be executed are based on our professional judgment with the starting point being the risks in the operations and the determined level of materiality. This implies that we focus the audit on such measures, areas and circumstances that are significant to the operations, and where non-compliance in such contexts would be of particular importance to the Second AP Fund's situation. We review and test decisions taken, decision-making documentation, measures taken and other circumstances relevant to our opinion on the administration.

Gothenburg, 6 February 2018

Helena Kaiser de Carolis
Authorised Public Accountant
Appointed by the Swedish Government

Peter Nilsson
Authorised Public Accountant
Appointed by the Swedish Government

Equities, participations and fixed-income securities

AP2's 20 largest Swedish shareholdings*

Company name	Share of equity, %	No. of	Market value, SEK million	Share of voting rights	Sector
Atlas Copco A	0.22	2 680 766	950	0.31	Industrials
Atlas Copco B	0.01	67 868	21	0.00	Industrials
Autoliv	0.42	658 178	689	0.42	Consumer discretionary
Boliden	1.06	2 886 660	810	1.06	Raw materials
Electrolux B	0.71	2 195 398	580	0.57	Consumer discretionary
Elekta B	2.98	11 425 715	774	2.20	Healthcare
Essity	0.61	4 254 357	991	0.33	Consumer discretionary
Fastighets AB Balder B	1.92	3 451 035	757	1.23	Financials
Hennes & Mauritz B	0.24	3 919 473	664	0.12	Consumer discretionary
Hexagon B	0.88	3 177 730	1 306	0.63	IT
Husqvarna B	2.45	14 126 277	1 103	0.89	Consumer discretionary
Investor B	0.30	2 266 149	848	0.06	Financials
Kindred Group	5.07	11 665 001	1 369	5.07	Consumer discretionary
Nordea Bank	0.35	14 027 733	1 393	0.35	Financials
Sandvik	0.51	6 411 758	921	0.51	Industrials
SEB A	0.34	7 402 035	713	0.34	Financials
Skanska B	1.10	4 624 616	786	0.77	Industrials
SKF B	0.98	4 454 964	812	0.58	Industrials
Swedbank A	0.63	7 104 223	1 406	0.63	Financials
Trelleborg B	1.34	3 633 687	690	0.69	Industrials
Volvo A	0.06	1 282 934	196	0.20	Industrials
Volvo B	0.26	5 588 588	853	0.09	Industrials

* The above table lists AP2's 20 largest holdings in Swedish equities, by worth.

A complete list of AP2's holdings may be found on the Fund's [website](#).

AP2's holdings in unit trusts

Name	No. of equities, participations	Fair value, SEK million
AQR Emerging Equities Fund	1 070 000	1 225
AQR Merger Arbitrage Fund	1 021 369	957
AQR Opportunis Convertible Arbitrage Offshore Fund	525 937	476
Ares Strategic Investment Partners IV	250 000 000	2 215
Babson Capital	3 026 617	2 511
CS Iris Fund Ltd.	115 143	997
CVC Credit Partners	1 000 000	1 139
Elementum Zephyrus Total Return Cat Bond	123 931	1 145
GAM FCM Cat Bond 2017 series 1	1 565	1
GAM FCM Cat Bond 2017 series 10	1 620	1
GAM FCM Cat Bond 2017 series 4	1 551	1
GAM FCM Cat Bond 2017 series 7	1 582	1
GAM FCM Cat Bond Inst Initial Series	2 418 226	2 988
Generation IM Asia Fund	476 107	690
Generation IM Global Equity A Shares LTA20 090401	579 966	2 011
Generation IM Global Equity Fund Class I 20071201	554 364	1 961
Generation IM Global Equity Fund Class I 20090401	280 368	1 003
Genesis Emerging Markets Class A	5 475 561	3 149
GSO Global Dynamic Credit Feeder Fund Ireland A	756 740	704
MG Lion Credt Opp Fund XIV – Series 1 Share Class	39 000	454

AP2's 20 largest foreign shareholdings*

Company name	No. of	Market value, SEK million	Sector
ABB Ltd	3 744 279	826	Industrials
Accenture	234 994	295	IT
AstraZeneca	1 743 102	992	Healthcare
Berkshire Hathway	177 940	289	Financials
China Construction Bank	35 623 000	269	Financials
Coca-Cola Co	753 900	281	Consumer discretionary
Comcast	897 863	294	Consumer discretionary
Consolidated Edison	411 569	286	Raw materials
Johnson & Johnson	377 115	431	Healthcare
McDonald's	225 200	317	Consumer discretionary
Naspers Ltd	182 346	416	Consumer discretionary
Nestlé	653 115	470	Consumer discretionary
Northrop Grumman	119 041	299	Industrials
Pepsico	363 288	357	Consumer discretionary
Proctor & Gamble	451 076	339	Consumer discretionary
Roche Holding	151 297	318	Healthcare
Samsung Electronics Co Ltd	36 801	717	IT
Taiwan Semiconductor Manufacturing Co Ltd	9 604 000	606	IT
Tencent Holdings Ltd	2 173 500	924	IT
Waste Management	404 471	286	Industrials

* The above table lists AP2's 20 largest holdings in foreign equities, by worth.

The Fund's capital shares and voting rights in the foreign companies listed in the above table in no instance exceed 0.24 per cent, and are therefore not reported.

A complete list of AP2's holdings may be found on the Fund's [website](#).

AP2's holdings in bonds and other fixed-income securities*Swedish nominal bonds, five largest holdings*

Bond	Fair value, SEK million
Swedish Government 1054	3 573
SEB #572	2 438
Stadshypotek AB #1584	2 053
Swedbank Hypotek #188	1 976
Länsförsäkringar #513	1 633

Global credits, five largest holdings

Bond	Fair value, SEK million
Intel Corp	380
AT & T	334
UBS AG London	246
Visa	244
Credit Suisse	228

Global government bonds, five largest holdings

Bond	Fair value, SEK million
Spain Government	212
Eurofima	205
BK Ned Gemeenten	204
Stadshypotek AB	203
French Republic	199

Detailed information about AP2's holdings in fixed-income securities is available on the Fund's [website](#).

A photograph of two women sitting on a large, light-colored rock by a body of water. The woman on the left has short brown hair and is wearing a blue and white striped long-sleeved shirt and blue jeans. The woman on the right has long blonde hair and is wearing a black patterned long-sleeved top and dark pants. They are both looking out towards the water, which is calm and reflects the surrounding greenery. In the background, there are trees and a grassy bank. A dark blue rectangular box with white text is positioned in the upper right corner of the image.

A complete summary
of the Fund's equity
portfolio is available
on the Fund's website.

Fund Governance Report

To comply with the Annual Accounts Act and the Swedish Code of Corporate Governance, Swedish listed companies are required to submit a corporate governance report.

The Code sets the tone for what shall be considered good practice for corporate players on the Swedish stock market. This Fund governance report has derived inspiration from the Code of Corporate Governance, while also taking into account the special characteristics that apply to the AP Funds.

Like the other AP Funds, AP2 is a state agency. Even so, the difference between the AP funds and other state agencies is considerable. The greatest difference is that the AP Funds enjoy a high degree of independence from the Swedish Government, because their operations are almost exclusively governed by law and the Government thereby has no provision in law to exercise control over them.

The Board of Directors

The Board of Directors of AP2, which is appointed by the Swedish Government, comprises nine Members. Two are appointed in accordance with proposals submitted by organisations that represent employees' interests and two in accordance with proposals submitted by organisations that represent employers' interests.

The Chair and Vice Chair are appointed by the Government, selected from the Members of the Board not put forward by employer or employee organisations.

Each director shall be appointed on the basis of his/her individual ability to enhance the management of the Fund.

On 24 May 2017, the Government made a decision on a new Board, with a change in the form of Jan Roxendal being appointed new member and Vice Chair following Sven Björkman. To date, the Government has chosen to implement twelve-month mandate periods for Board Members, whereby current appointments remain in effect until the Fund's income statement and balance sheet for 2017 have been adopted.

The Board has full and undivided responsibility for the operations of the Fund, within the parameters established by the Swedish Parliament concerning the organisation of the Fund and management of its assets. In instances where the work of the Board falls outside the terms of the Swedish National Pension Funds Act, it is governed by the rules of procedure adopted annually by the Board.

Fees and other remuneration paid to Board Members are determined by the Swedish Government. This remuneration paid per annum amounts to SEK 100 000 for the Chair, SEK 75 000 for the

Board member	Remuneration Committee	Risk Committee	Audit Committee	Attendance/ total meetings	Comments
Marie S. Arwidson	X		X	6/6	
Jan Roxendal		X		4/4	from June
Sven Björkman	X	X		1/2	up to May
Jeanette Hauff		X		6/6	
Ola Alfredsson				6/6	
Ole Settergren				5/6	
Ulrika Boëthius				6/6	
Christer Käck				5/6	
Johnny Capor			X	6/6	
Kristina Mårtensson				5/6	

Vice Chair and SEK 50 000 for each of the other Board Members. The Government has determined that remuneration totalling SEK 100 000 may be paid for committee work. No fees have been paid to Board Members for their work on the Remuneration Committee. For work on the Risk Committee, remuneration has been paid to the Chairman in an amount of SEK 30 000 and to individual members in amounts of SEK 25 000. For work on the Audit Committee, remuneration has been paid in an amount of SEK 20 000 to the Chair and in amounts of SEK 15 000 to individual members.

The work of the Board

The most important tasks assigned to the Board of AP2 involve the establishment of operational targets, the recruitment and evaluation of the CEO and the taking of decisions concerning broad strategic issues, such as the composition of the Fund's strategic portfolio. To ensure that the Board's decisions are implemented, that intrinsic risks are managed and that the Fund's operations are in all other respects conducted in an appropriate manner, effective control and follow-up are essential. The Board of Directors held six ordinary meetings during the year. In October, a longer meeting was held which addressed the Fund's response to a consultation in respect of a memo entitled *Changed rules for the First-Fourth AP Fund* as well as general strategic matters with a focus on interest rate markets, execution strategies and the private equity market. As well as Board Members, Board meetings are attended by the Fund's CEO and the Secretary to the Board. Other Fund employees may also participate, in an advisory role as experts or to submit a report on a given issue. The CEO's performance is evaluated once a year. The CEO does not attend this meeting.

Fund targets

The Fund is committed to minimising the consequences that derive from activation of the automatic balancing mechanism, by generating a solid return on invested capital. To meet this requirement, AP2 has composed a portfolio that is expected to generate an average annual real return of 4.5 per cent over the long-term.

Strategic portfolio

A new strategic portfolio has been approved for 2018.

Discussion about performance, governance issues and costs

The Fund's management performance is reviewed at every Board meeting. The Board discusses fundamental sustainability and governance issues at every meeting, and it regularly discusses the strategic allocation and investments in private equity funds and real estate. Cost trends are considered on a quarterly basis, and the Board regularly reverts to the issue of the Fund's cost efficiency. Its annual responsibilities include decisions concerning the adoption of the year-end accounts, the budget, business plan and strategic portfolio.

Board committees

The Board has established a Remuneration Committee. The Remuneration Committee consists of the Fund's Chair and Vice Chair. The CEO is normally co-opted to meetings of the Remuneration Committee. The CEO is not present when the Committee determines his/her remuneration.

The Remuneration Committee is a drafting committee for the Board, tasked with considering the level of remuneration for the CEO, establishing guidelines for the remuneration of the Fund's executive management and determining issues related to incentive programmes for Fund employees. Swedish Government guidelines on terms of employment for AP Fund employees are monitored and checked against the Fund's own guidelines and ensure their correct implementation. Decisions reached by the Remuneration Committee are submitted for consideration by the Board at its next meeting.

The Board has established a Risk Committee. The Risk Committee has been established as an advisory, supervisory and preparatory body for the Board concerning the Fund's risk control and risk management activities. The Risk Committee comprises two Members of the Board. The items placed before the Committee for consideration are presented by the Fund's CEO and the Head of Performance and Risk Management.

The Risk Committee is not authorised to make decisions on behalf of the Board or Fund, except in those cases where such authority has been delegated by the Board. The responsibility of the Board and its individual directors is in no way limited by the establishment of the Risk Committee or its duties. The operations of the Committee, which meets at least six times a year, are conducted according to an agenda determined by the Board on an annual basis. During 2017, among other activities, the Risk Committee reviewed developments concerning the Fund's financial and operational risks, as well as reviewing its benchmark indices and alternative investments. The Fund's latest risk status was also presented and discussed at each of these meetings.

The Board has established an Audit Committee. The Audit Committee has been established as an advisory, supervisory and preparatory body for the Board in the areas of financial reporting, auditing, internal control, external and internal auditing. The Audit Committee comprises two Members of the Board. The items placed before the Committee for consideration are presented by the Fund's CEO, the Head of Business Control and the CFO, as well as the Fund's auditors.

The Audit Committee is not authorised to make decisions on behalf of the Board or Fund, except in those cases where such authority has been delegated by the Board. The responsibility of the Board and its individual directors is in no way limited by the establishment of the Audit Committee or its duties. The Audit Committee met four times during 2017, one meeting being held jointly with the Board's Risk Committee for the annual review of the Fund's progress on operational risk, compliance reporting and internal audit assignment for 2017. During the year, the work of the Committee focused on the launch and monitoring of the internal audit assignment decided upon by the Board, issues relating to investments in non-listed assets, ongoing work

on operational risks, and reporting from and discussions with the Fund's auditors.

Evaluation of Board performance

The performance of the Board is subject to annual evaluation. The evaluation was performed by an external consultant at the beginning of the 2017 in the form of a questionnaire and interviews with all Members and the CEO. The results of the evaluation were presented to the Board of Directors at the meeting in April, where this was also discussed. Considerable emphasis is placed on continually developing the work of the Board, which already functions well, as well as collaboration with the Fund's executive management.

Audit

AP2's auditors are appointed by the Swedish Government. The initial mandate was held by Sussanne Sundvall and Peter Nilsson from PwC and entered into force on 24 May 2017. PwC is also tasked with conducting the audits of the other AP Funds, and Sussanne Sundvall has also been appointed to coordinate the audits of all AP Funds. At her own request, the Government discharged Sussanne Sundvall from her duties on 14 September and instead appointed Helena Kaiser de Carolis as new auditor and Peter Nilsson as coordinating the audit for the AP Funds. This mandate applies until adoption of the Fund's income statement and balance sheet for 2017.

The auditors submit an audit report, as well as making an oral report direct to the Board at least once a year. They also submit written reports concerning their audit of the annual accounts and management administration. The auditors also submit a report to the Ministry of Finance once a year.

The auditors' assignment includes inspection of current business operations, the administration, the annual accounts and

the annual report. The auditors express their opinion of the annual accounts and administration, based on their audit. This assignment also includes an assessment to determine that the accounts of AP2 have been prepared in compliance with generally accepted accounting and valuation principles jointly determined by the AP Funds, and that they provide a true and fair picture of the Fund's financial position.

The assignment has also involved an examination of the Fund's guidelines on remuneration in compliance with Swedish Government guidelines on remuneration to key executives and employees, and compliance with these. A separate statement has been submitted, see the Fund's [website](#).

Internal control

The Board has ultimate responsibility for the Fund's internal control. In the Fund's risk policy, the Board has established frameworks and guidelines for the overall allocation of responsibilities, risks, risk limits and routines to monitor and control that such guidelines are observed. The CEO is responsible for ensuring that the operations are performed within the specified frameworks and investment provisions and that monitoring and follow up take place on a daily basis. In order to ensure that AP2's risk management and control environment are secured in a structured manner, the Fund works according to the principle of the "Three lines of defence". Asset Management which, according to the model, is primarily considered to be the first line of defence, is responsible for the risk. This means that responsibility has been delegated for implementing the Fund's adopted risk strategy and for ensuring that the Fund stays within the defined limits as required by law, adopted by the Board or that apply to the Fund's activities through other decisions.

The second line of defence consists primarily of the functions of Risk Management and Compliance which, among other things, monitor, check and report the Fund's risks and how the Fund follows internal and external regulations. The Risk Management Department is organisationally independent of functions that are engaged in active trading decisions. This risk control process is based on the generation of effective and transparent risk reports and analyses. Reporting to the Fund's executive management is conducted on a daily basis, while regular updates are submitted via reports and at meetings of the Risk Committee and the Board. The Compliance function is tasked with ensuring that the Fund fully complies with the regulations governing its activities. This includes monitoring changes to pertinent regulations and disseminating information about these throughout the Fund, through training, policy statements and by other means. During the year, new policies have been developed with reference to new or changed regulations, and several training courses have been completed.

The third line of defence consists of an external independent internal audit function which evaluates and improves efficiency in a systematic and structured way in the Fund's risk management, internal control and management processes. Decisions on annual internal audit assignments are taken by the Board. Reporting the results from the internal audit will take place to the Risk and Audit Committees and the Board of Directors at the frequency each body establishes. The internal audit assignment for 2017 concerned an evaluation of the Fund's ongoing work regarding the structure and documentation of internal governance and control. The assignment also included an evaluation of the Fund's process for internal work with operational risks and suggestions for future focus areas for internal audits. Reporting of the completed review will take place during spring 2018.

Board of Directors



Marie S. Arwidson

Chair since 2010. MSc (Econ). Formerly Managing Director of the Swedish Forest Industries Federation. Member of the Board of Rottneros AB and member of the Royal Swedish Academy of Engineering Sciences. Born 1951.



Jan Roxendal

Vice Chair since 2017. Chairman of the Swedish National Export Credits Guarantee Board (EKN). Member of the Board of Catella AB and Magnolia Residential AB, and member of Sarafimerlasarettet Foundation. Born 1953.



Jeanette Hauff

Member of the Board since 2010. PhD in Economics. Lecturer Gothenburg University's School of Business, Economics and Law, and the University of Borås. Member of the Board of QQM Fund Management AB. Born 1965.



Ola Alfredsson

Member of the Board since 2010. Embassy counsellor at the Swedish embassy in Washington. Born 1964.



Ole Settergren

Member of the Board since 2013. Head of Pensionsmyndighetens utvecklingsavdelning (The Swedish Pensions Agency Development Unit). Born 1964.



Ulrika Boëthius

Member of the Board since 2012. Chair of Finansförbundet (The Financial Sector Union of Sweden). Member of the Boards of TCO (Confederation of Professional Employees), NFU (Nordic Financial Unions), Cefin (Centre for Banking and Finance) at KTH. Born 1961.



Johnny Capor

Member of the Board since 2014. Former Deputy Managing Director and CFO of KF/Coop. Member of the Board of Folksam Liv. Born 1966.



Kristina Mårtensson

Member of the Board since 2015. M.Sc. (Econ). Administrative Director of the Kommunal trade union. Born 1966.



Christer Käck

Member of the Board since 2014. M.Sc. (Econ). Self-employed. Member of the Board of Aktie Ansvar. Member of the Investment Board of the Swedish Union of Journalists. Born 1953.

Executive Management



Eva Halvarsson

CEO. Employee since 2006. Other directorships: Board Member of Vasakronan AB, Kungliga Operan AB, UN-PRI, Gothenburg Award for Sustainable Development and FinansKompetens-Centrum. Born 1962.



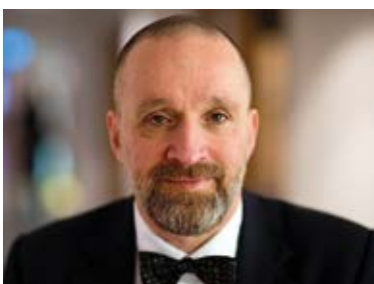
Ulrika Danielson

Head of Communication & HR
Employee since 2009. Born 1965.



Ola Eriksson

Head of IT, Business Control and Accounts. Employee since 2001. Other directorships: Board member of the Centre for Finance (CFF) at the School of Business, Economics and Law, Gothenburg University. Born 1965.



Hans Fahlin

Chief Investment Officer (CIO). Employee since 2010. Other directorships: Member of the Board of AFS Interkulturell Utbildning Sverige, Chair of the Centre for Finance (CFF) at the School of Business, Economics and Law, Gothenburg University, member of the Polar Music Prize Administrative Board, member of the Board of STIM and Chairman of the Institute of Quantitative Research Europe (INQUIRE). Born 1957.



Martin Jonasson

General Counsel. Secretary to the Board. Employee since 2001. Other directorships: Member of the Board of Stiftelsen De Blindas vänner (Friends of the Blind Foundation). Born 1964.



Henrik Westergård

Head of Performance and Risk Management. Employee since 2012. Born 1973.

“The Board of Directors of AP2, which is appointed by the Swedish Government, comprises nine members.

Auditors

Helena Kaiser de Carolis,
Authorised Public Accountant, PwC.

Peter Nilsson,
Authorised Public Accountant, PwC.

Definitions

Absolute return on investment

The return generated on a portfolio or portfolios of assets, measured in kronor or per cent, of the original invested amount.

Active/passive management

Active management: Portfolio management actively deviates from the benchmark index, to generate an active return.

Passive management: Portfolio management strives for a return equal to benchmark portfolio.

Active risk/Tracking error

The variation in relative return. Often measured as standard deviation on the relative return. Active risk is calculated using daily data to determine relative return.

ALM study

Asset Liability Modelling. An analytical model used to determine the Fund's strategic portfolio. The study, which is revised on a continual basis, is designed to determine the optimal composition for the different classes of asset under Fund management, to ensure that it satisfies the Fund's long-term commitment to the collective requirements of the Swedish national pension system. The judgements based on this analysis shall take into account demographic change as well general economic trends.

Benchmark index

Index based on AP2's strategic portfolio, against which the Fund's management performance is measured.

Carbon footprint

'Carbon footprint' is the term used to describe a company's or portfolio's combined carbon dioxide emissions.

Credit risk/counterparty risk

Credit risk: Refers to the risk that an issuer may become insolvent or be awarded a lower credit rating.

Counterparty risk: Refers to the risk that the other party may be unable to meet its business obligations.

CSA contract

An annex to the ISDA contract which regulates how the party that has an outstanding debt (unrealised loss) must pledge a security for the loss in the form of cash and cash equivalents or securities.

Discretionary mandate

A mandate that is limited and specific to a single investor. The alternative to discretionary management is traditional fund management.

Duration

A measure of interest risk that yields an asset-relative change in value with an interest adjustment of one percentage unit.

Ex-ante

Projected calculations that look ahead in time.

Ex-post

Calculations from the realised data that look back in time.

Fair value

Fair value is defined as the amount for which an asset may be transferred or a debt settled, between parties who are mutually independent and who have a vested interest in completing the transaction. Normally speaking, this means that listed assets are valued at the buying-rate (market value) and that the fair value of non-listed assets is estimated with the help of generally accepted valuation models.

FX forward contract

A derivative instrument involving a contract to purchase foreign currency at some future date at a predetermined rate of exchange.

GTAA

Global Tactical Asset Allocation mandate. A mandate that applies a TAA strategy on a global basis.

Idiosyncratic risk

Risk in individual positions that can be diversified if the number of positions are increased.

Implementation effects

Return contributions that derived from implementation of the strategic portfolio and index switches.

Information ratio

A gauge of risk-adjusted relative return. Measured as relative return, divided by tracking error.

Interest swap

A contract between two counterparties, in which one interest flow is exchanged for another. Normally, the undertaking given by one party to pay a fixed rate of interest is exchanged for the other party's undertaking to pay a floating rate of interest.

IPEV

International Private Equity and Venture Capital Valuation Guidelines.

ISDA contract

International Swaps and Derivatives Association. An ISDA contract is a standard contract for the regulation of trading in derivatives between two counterparties.

Liquidity risk

Refers to the risk that securities cannot be converted into cash, because of reduced access to or demand from the market, which either precludes the purchase or sale of such securities, or would require their sale at a loss.

Market risk

The market risks most relevant to AP2 are share-price risk, interest-rate risk and currency risk.

MSCI index

International equity indices managed by Morgan Stanley Capital International.

Operational risk

Refers to the risk that an error or stoppage in operations could lead to economic loss or reduced credibility.

Quantitative management

Portfolio management that focuses on exposing incorrect market pricing with the help of a mathematical model.

QFII licence

Investors who have been granted a licence to invest in Chinese domestic equities by the Chinese Financial Supervisory Board.

Relative return

Portfolio return compared to return on Fund's strategic portfolio. The return is cleared of commission and operating expenses.

S&P/Standard & Poor's

Standard & Poor's composite index. A cap-weighted share index of 500 US companies. Selection is based on size, liquidity and industrial sector, among other factors.

Sharpe ratio

A gauge of risk-adjusted return. Measured as the portfolio's absolute return less risk-free interest (SSVX 12 months), divided by the standard deviation on absolute return.

Strategic portfolio

AP2's strategic portfolio is determined annually by the Board of Directors and confirms the Fund's decision on strategic asset allocation.

Systematic risk

Market risk segment that cannot be diversified by increasing the number of positions.

TAA

Tactical Asset Allocation. An active portfolio management strategy focused on overperformance in diverse asset classes.

Value-at-Risk, VaR

A measure of risk that indicates the maximum loss, based on a given confidence level, that a portfolio may incur over a given period. VaR is normally calculated at a confidence level of 95 per cent.

Volatility

Volatility refers to the amount the price of a financial asset varies over time. This is normally expressed as a percentage, in terms of the standard deviation.

“Through our assignment, we have a long-term perspective, and we evaluate the results during a longer time-frame. The average annual real return for the last five and ten years amounts to 9.0 and 5.0 per cent respectively.

Eva Halvarsson, CEO of AP2.



Andra AP-fonden
Second Swedish National Pension Fund - AP2