



Andra
AP-fonden

ANNUAL REPORT AND SUSTAINABILITY REPORT 2018

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Andra AP-fonden

Andra AP-fonden is one of **Northern Europe's largest** pension funds, and manages **SEK 334.8 billion** in virtually all asset classes all around the world. The Fund is a **long-term and responsible** asset 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 brake being released.



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. In the body text, AP2 can be used instead of Andra AP-fonden.

Andra AP-fonden's Annual Report and Sustainability Report covers the period January–December 2018 and was published on 11 February 2019. The annual report is supplemented by a separate GRI report on the Fund's website, www.ap2.se

You can also read the Council on Ethics of the AP Funds' yearly report at www.etikradet.se

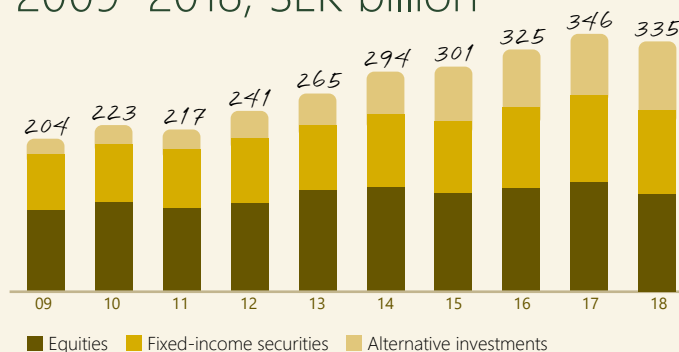


The AP Funds will manage assets so that they provide the most benefit for the pension system.

Read more on page 10.



Andra AP-fonden's Fund capital 2009–2018, SEK billion



Important mission require world-class management

Read the interview with the Fund's Chief Investment Officer, Hans Fahlin, on page 20.

The year in brief

The result for 2018 was negative and amounted to SEK –4.3 billion and primarily reflects a negative development on the world's stock markets, but also good results within unlisted assets. The Fund exceeded the long-term return assumption, which is 4.5 per cent. In the last five years, the Fund's annual average real return has amounted to 5.8 per cent and the last ten years the return has been 7.7 per cent.

Fund capital

The Fund capital reached **SEK 334.8 (345.9) billion** on 31 December 2018.

334.8

Result

The Fund posted a net result for the year of **SEK –4.3 (28.8) billion**.

–4.3

Operating expenses

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

0.06

Net outflows to the national pension system

Net outflows to the national pension system of **SEK –6.8 (–7.4) billion**.

–6.8

Relative return

The relative return on the total portfolio, excluding alternative investments and operating expenses, amounted to **–0.2 (0.1) per cent**.

–0.2

Total return

Return on the total portfolio amounted to **–1.3 (9.0) per cent**, including commission fees and operating costs. Excluding these costs, the portfolio returned **–1.2 (9.1) per cent**.

–1.3

Five-year overview, financial key ratios

	2018	2017	2016	2015	2014
Fund capital, flows and results, SEK million					
Fund capital	334 828	345 931	324 522	300 624	293 907
Net outflows to national pension system	-6 773	-7 375	-6 637	-4 944	-5 120
Net result for the year	-4 330	28 784	30 535	11 661	34 315
Return, %					
Return on total portfolio before commission expenses and operating expenses	-1.2	9.1	10.5	4.1	13.3
Return on total portfolio after commission expenses and operating expenses	-1.3	9.0	10.3	4.0	13.1
Annualised return after commission expenses and operating expenses, five years	6.9	9.8	10.6	8.0	9.4
Annualised return after commission expenses and operating expenses, ten years	8.8	6.0	5.5	5.7	7.1
Risk, %					
Standard deviation ex-post, total portfolio ¹	7.2	8.9	8.7	8.7	9.1
Standard deviation ex-post, daily market valued portfolio	6.0	3.9	7.2	8.9	5.7
Sharpe ratio ex-post, daily market valued (listed) portfolio	neg	2.5	1.4	0.3	2.2
Sharpe ratio ex-post, total portfolio	neg	2.9	1.9	0.5	2.6
Expense ratio as % of managed capital					
Expense ratio, cost including commission expenses	0.14	0.15	0.15	0.18	0.17
Expense ratio, operating expenses	0.06	0.06	0.07	0.07	0.07
FX exposure, %	32	33	31	30	24

¹ Calculated on 10 years quarterly return.

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Key figures sustainability

	2018	2017
AP2's listed equity portfolio		
The equity portfolio's absolute emissions of greenhouse gases (Scope 1 and 2) (tCO ₂ e million)	1.7	2.6
Carbon dioxide intensity relative to ownership share of the companies' market value (tCO ₂ e/SEK million)	13	18
Carbon dioxide intensity related to ownership share of the companies' turnover (tCO ₂ e/SEK million)	15	28
Carbon dioxide intensity, weighted average (tCO ₂ e/SEK million)	16	24
Market value of the Fund's portfolio covered by CO ₂ e data (SEK billion)	130.5	142.4
Business travel		
Proportion of train journeys between Gothenburg and Stockholm, %	88	91
Carbon dioxide emissions from:		
Rail, domestic, tonnes of CO ₂ e	0	0
Air, domestic, tonnes of CO ₂ e	5	5
Air, abroad, tonnes of CO ₂ e	169	172
Internal environmental indicators		
Electricity, kWh	126 000	135 000
Renewable electricity, %	100	100
Copying paper, purchased (A4), kg	315	350
Number of printouts	107 000	159 000
Other		
Female staff, %	35	34
Proportion of women in senior positions, %	33	35
Proportion of employees who have undergone sustainability training, %	94	N/A
Proportion of board members who have undergone sustainability training, %	100	N/A

With focus on sustainable management

For us at Andra AP-fonden, 2018 was characterised by an underlying strong global economy, but with turbulence in the markets due to various geopolitical moves, preparations for the changed investment rules and continued integration of sustainability. An important part of the latter was that we implemented our own developed indices, with real focus on sustainability factors. We will continue to focus on what is best for Sweden's pensioners by thinking long-term and being sustainable in our strategy, while at the same time seeking constant improvements.

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Also in 2018 we at AP2 have been operating in a turbulent environment in many ways. The financial markets were characterised by great uncertainty, partly because of the risks of escalated global trade conflict and that the UK may leave the EU without a deal. The drawn-out formation of the government in Sweden also contributed to this uncertainty, albeit to a lesser extent.

In contrast to this, the underlying economic development in large parts of the world was positive in 2018, for example, the US recorded the lowest unemployment rate since the 1970s. Economic development in Sweden was also relatively strong through the year.

Diversified portfolio stays strong when the wind blows

I usually compare our mission to steering an atlantic steam engine, meaning you shouldn't change course just because it gets a bit windy. The last year has been a

test for our diversified portfolio and our long-term strategy. In 2018, we reported a negative return on the portfolio of -1.3 per cent. The main reason for this was the market turbulence that had a negative impact on our equity assets during the last weeks of the year. Based on the relatively good economic development around the world, our view is that neither the low valuation of the stock markets, which we saw towards the end of the year, nor the valuation of the Swedish krona correspond to the actual real-economic situation. The decline in the equity portfolio was offset by a good return on, among other things, private equity investments, real estate and Chinese government bonds.

In order to cope with a possible slowdown of the economy in the future, a robust portfolio and an organisation that can cope with blustery conditions are required. My view is that we both have these parts in place and are well-equipped for the future.

New investment rules are welcome

At the end of 2018, the government decided to introduce new investment rules for the AP funds. We welcomed this decision. Having the opportunity, among other things, to invest more in different types of unlisted assets, which can compensate for a lower expected return on certain listed assets, and further diversify the portfolio, gives us better opportunities to create a good, continued risk-adjusted return. During the year, we have prepared ourselves for these new rules and we will, over time, take advantage of the opportunities the new rules provide. We're also looking forward to further changes to investment rules, which the parliament will hopefully decide on in 2019.

I can confirm that since AP2 was established in 2001, we have had the same regulations. Although the underlying Swedish income pension system has strengthened in recent years, it is

*“**New investment rules** are welcome and we will now have the opportunity, among other things, to **invest** more in different types of **unlisted assets**”*



nevertheless natural to revise the legislation as the outside world changes. For this reason, I would like a regular review of the investment rules to be incorporated into the future governance of the AP Funds.

Exemplary management

In addition to changed investment rules, the government decided that the AP Funds should manage the funds assets in an exemplary manner through responsible investments and responsible owner-

ship. That this is not then regulated in detail, I think shows a great confidence in the AP funds, and it is now up to us to show that we can live up to the new rules in a responsible manner.

At AP2, one of our fundamental values is continuous improvement, and in line with this, our ambition is to globally be at the forefront in driving sustainable asset management. We integrate sustainability aspects throughout the process, from evaluation of potential investments to ongoing monitoring of existing invest-

ments. As we raise issues on the agenda, such as climate change, expectations increase and the new law challenges the AP Funds to work in an even broader way on sustainability issues than before.

Increased expectations will also increase demands, for example that the AP Funds should divest from all fossil fuels. This is a complex issue for us. Sometimes it may be better to continue as an active, demanding as well as supportive owner in order to be able to influence the companies and contribute to the transitions that need to

Internationally recognised indices

One of the things that I remember best from 2018 is that at the beginning of the year we were able to implement our own internally developed indices for global equities in internal quantitative management. They cover about a quarter (barely SEK 90 billion) of our entire portfolio, and the ESG factors (Environmental, Social and Governance) are the ones that weigh heaviest in the indices. Our work has attracted international attention and many have wanted to know more of our process to learn from it.

In 2019, we will begin work on doing the same in the quantitative management of bonds.

83%

AP2 manages 83% of the capital, almost 280 billion kronor, internally.

Climate issues high on the agenda

During 2019, we will work with climate analyses where, based on various scenarios for global development, we will examine what impact they will have on our portfolio. It is hard, but important work. We will also continue to have a dialogue with companies about the needs and their work on changing the energy system. This is a central part of the work that has to be done and this creates opportunities for us to identify infrastructure investments that facilitate transition in the energy system.

be made. We do this, for example, within the framework of the dialogue project Climate Action 100+. At the same time, we have divested from over 80 fossil fuel companies, which we believe do not have the preconditions needed for transition.

In addition to what we and other investors are doing, it will probably require national and international policy measures in the form of legislation, for example regarding a price on carbon dioxide emissions, in order to succeed in changing to a society in accordance with the Paris Agreement.

Integrating sustainability is everything we do

Our strategy for sustainability is to integrate sustainability into everything we do. I think our commitment, culture and curiosity in this area give us good conditions for succeeding with this work. Our board, management and all our other employees are constantly discussing these issues. Anyone being able to take the initiative and the person who has a good idea being the one to drive it forward is built into our culture. We realise that we constantly need to develop our expertise in the field, we are curious and want to learn more. We will therefore continue to take an active part in external exchanges through 2019, among other things through our large international network.

In addition to working to ensure that our investments are in line with the Paris Agreement, we have during some years

made investments with a direct link to the UN's sustainability development goals (Agenda 2030), for example in private equity capital and social bonds, and we hope to be able to do more in the future. In 2018, it was ten years since we were involved in investing in the world's first green bond, and our long experience has given us a lot of knowledge in this area. We have even continued developing and enhancing our work regarding human rights.

We believe in collaboration within the sustainability area. Therefore, we work with other peers, including other large international institutional owners, to discuss these issues. We also gather together the real-estate companies that we are major shareholders in so that they can be inspired by and learn from each other's work.

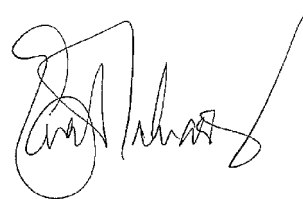
Create the best possible conditions

In 2018, we devoted a lot of time and effort to increasing the analysis capacity of our portfolio. By 2020, we aim to have a new sustainable portfolio and a new digital platform. In 2019, we will focus on developing our IT structure, which will support our continued internal work on developing models and systems and, in the long term, reducing our costs.

We are a small organisation, but we manage 83 per cent of the capital, almost 280 billion kronor, internally. It is inspiring that we have such advanced management and that we are often recognised for this internationally. Our

business is based on our employees being able to perform at their best. Since the needs are different, we introduced a variation-based office in 2018. With developed IT support in place, we'll be able to work more efficiently and safely, while at the same time simplifying internal cooperation.

Of course, it is not fun to say that the Fund's return for the year was negative. However, with a business that is so dependent on how capital markets develop, this is something we have to be able to handle. It is an obvious condition for all investors and in fact constitutes a fundamental part of our role in the pension system. I am therefore proud to have the privilege of leading an organisation that is full of innovative drive, where everyone is involved and they push our continued development forward, at the same time maintaining a long-term focus. I would like to thank all our employees for all the hard work that was done in 2018, and I look forward to working together in 2019 to continue our work to do the very best for Sweden's current and future pensioners.



Eva Halvarsson, CEO

Strong economy but with geopolitical tensions

In 2018, the global economy developed strongly and in several places unemployment reached the lowest levels in decades. But the year was lined with geopolitical moves, mainly from President Trump, and the US introducing import duties. The economic effects are still relatively small, but will increase if trade conflict escalates. Against the background of good economic development, inflation rose and several central banks began – or continued – to raise their policy rates. This is expected to continue in 2019, at the same time as growth slows somewhat.

Growth was strong in 2018 and benefited from highly exaggerated demand and high resource usage, especially in developed countries and, not least, in the US. The labour markets continued to develop positively in many economies with rising employment and falling unemployment. Unemployment in particular reached the lowest levels since the 1980s and, from many places, resource shortages were reported as obstacles to further expansion. Developments in emerging markets were also relatively good through the year. It was the second year in a row that global growth went above the long-term trend. Despite the fact that several central banks have begun to raise policy rates, they remain at relatively low levels from a historical perspective, which gives continued business cycle support.

USA – economic driving force and political trouble-maker

In the US, tax cuts and fiscal stimuli drove further growth above already high levels. Confidence among both households and companies is still considerably higher than normal, which indicates that growth will continue to develop strongly in the near future. The trade conflict initiated by President Trump, mainly against China, has not had any major growth effects in the US so far. It will probably take more time before we will see their extent. Dur-

ing the autumn elections, the Republicans lost power in the House of Representatives to the Democrats, but retained power in the Senate. This means that there is, at least in theory, less room for manoeuvre for Trump and the Republicans to push through further stimulus policies.

The eurozone's growth rate slowed in 2018, but from very high levels. The economic policy of low interest rates and relatively expansive financing politics continued to support development. Unemployment, which has fallen rapidly in recent years, continued to decline, stimulating household consumption. In the third quarter, growth rates in Europe fell. This was due in part to stricter requirements in the automotive industry on vehicle fuel consumption and emissions, and a reduced export demand.

The Swedish economy continued to develop strongly in 2018 and was also stronger than many analysts had expected. It was mainly a couple of factors that contributed to this. Household consumption drove growth during the first half of the year, and housing investment continued to contribute more to growth than expected. Exports, on the other hand, were relatively weak at the beginning of the year, but gradually increased, partly due to the weak exchange rate of the Swedish krona.

Insecurity about global trade

It's still too early to see the actual real-economic consequences of the escalated trade conflict. It is relatively clear that China and other emerging countries were more adversely affected by the trade conflict than the US, but also by higher global interest rates and a stronger US dollar. To counter the negative growth consequences, the Chinese government began to stimulate the economy as early as last summer, but to a cautious degree. At the time of writing, it's not a dramatic deterioration of the economic situation, as growth rates in emerging countries are still relatively good. An important reason for this is that the three other major emerging economies - India, Brazil and Russia - became stronger during the year. At the same time, there were some countries that had a negative impact on growth, including Argentina and Turkey, but overall, they do not weigh heavy enough to have an impact.

Central banks are tightening up

Given the very strong economy and rising US inflation, the US Federal Reserve raised the policy rate four times during the year. The European Central Bank, the ECB, announced during the summer that they will cease their bond purchases at the turn of the year, so-called quantitative easing (QE). The purpose has been

to lower the interest rate on long-term bonds, thereby affecting the required rate of return, stimulating demand and adding liquidity to the financial system. The ECB plans to start raising the policy rate at the earliest in the summer of 2019, but will proceed cautiously. In Sweden, the Riksbank raised its policy rate in December, for the first time since 2011, and has announced a cautious rate of increase. The underlying inflation rate – the CPIF – which the Riksbank uses as a basis, has been close to the bank's target for over a year. Despite the fact that an increasing number of central banks have begun to raise policy rates, they remain low from a historical perspective, which continues to support the economy.

A worrying geopolitical outlook

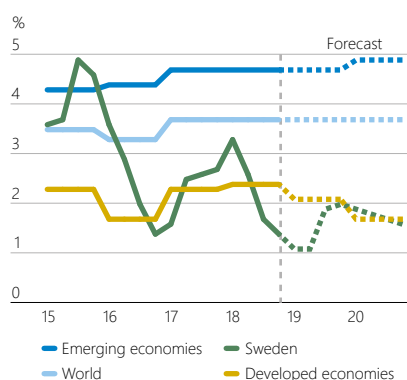
The global economy developed strongly during 2018. In addition, inflation rose

during the year and thereby global interest rates. A reduction in the rate of growth of the global economy should therefore be expected. One reason is that it will be difficult to match the strong growth of 2018, which to some extent was affected by US stimulus measures in the middle of a boom. Another reason is that the introduction of tariffs de facto means trade barriers that reduce global trade and in turn risk dampening growth. A third reason is that several of the major central banks will begin, or continue, to raise their policy rates during 2019, which means that market interest rates will rise. Eventually, it will also have a more restrictive effect on the economy. How strong the slowdown in the economy will be is determined by the continued development of US trade conflicts.

An improved dialogue primarily between the US and China, which would

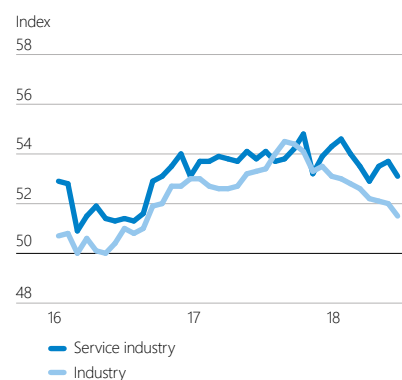
mean tariffs at existing levels, is only expected to have a less negative effect on growth. If the break in the conflict, which presidents Trump and Xi Jinping agreed on at the end of November, result in a deal, the effects will be positive instead. If, on the other hand, the conflict escalates, it will cause lower demand due to higher prices and generally reduced activity. If the conflict also spreads to more countries and, to a greater extent, affects the financial markets and prospects of households and businesses, this could lead to a larger global economic downturn. In Europe, there are increased risks for the economy in the event of a poor outcome of the internal UK negotiations on Brexit. On a global level, this is expected to have minor consequences. The market turbulence that occurred towards the end of the year is not judged to be rooted in the relatively good real-economic development.

GDP GROWTH (% ANNUAL RATE)



Source: IMF and Riksbanken
(Swedish Central Bank) forecasts

**GLOBAL PURCHASING MANAGERS INDEX
(GROWTH OVER 50)**



Source: JP Morgan/Markit Economics

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 public pension system in its current form was introduced in 2001. It then replaced the earlier ATP system which was not viewed as being sustainable in the long term. One difference to the previous system is that the entire life income forms the basis of the pension. Another difference is that pensions are linked to socio-economic development and the system's financial balance.

The Swedish pension system consists of two parts: the income-based pension, where the First, Second, Third, Fourth and Sixth AP Fund are included, and the premium pension system, which includes the Seventh AP Fund. Of the so-called pensionable income, 16 per cent is paid into the income pension system and 2.5 per cent to the premium pension system.

The financial position of the income-based pension is provided by its balance sheet. The assets in the system consist of the contribution assets, which represents the value of future pension contributions, and the capital of the First, Second, Third, Fourth and Sixth AP Fund. The AP Funds account for a relatively small portion of the assets, about 15 per cent. The liabilities are made up of the pension liability, which represents the value of accrued pension rights. The financial position of the system is summarised by the ratio between assets and liabilities, the so-called balance ratio.

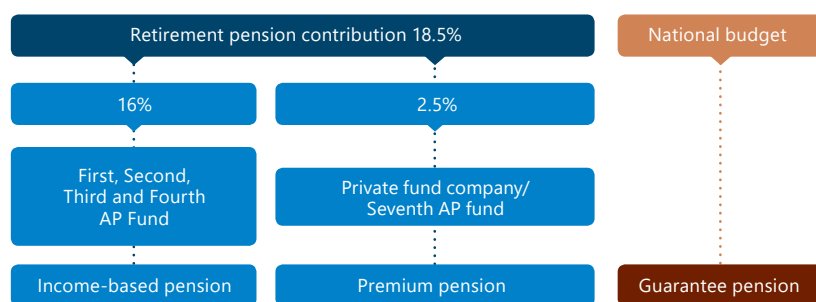
System in balance

When the balance ratio exceeds 1.0, the system is in balance. When this is the

case, pensions are calculated up, as expected, in line with the income index. However, if the system is not in balance, i.e. when the balance number is less than 1.0, a mechanism called automatic balancing is activated. This mechanism slows down (hence the usual term 'brake') the upward adjustment of the pension debt. This means that pensions are listed with a lower growth rate than the income index.

The automatic balancing mechanism means that the system is autonomous (self-regulating). This is one of the cornerstones of the system. This, in turn, means that the system does not depend on the state injecting capital in the event of a deficit. The consequence, however, is that pensioners are relatively worse off

THE SWEDISH PENSION SYSTEM



The income pension system is a so-called distribution pension system. This means that the payments to the pension system (the contributions) from the gainfully employed fund the payments to the pensioners. The contributions are therefore not funded, unlike, for example, the premium pension system, but instead give rise to pension rights. These pension rights are normally written each year in line with the average income trend in Sweden, the so-called income index.

*“The return on the AP Funds’ capital has **contributed** to **avoiding automatic balancing** for several years”*



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during this period than if the system had been in balance. This is because the growth in pensions is lower than it otherwise would have been, or even negative. However, when the system is in balance again and stops ‘slowing down’ it can be said that the system ‘hits the ignition’ to catch up with the income index again.

This means that the pension rights for those who have not taken out a pension during a balancing period will not necessarily be affected. However, for pensioners, i.e. those who received payments during the balancing period, a balancing period inevitably leads to a loss. This is because pension payments during the balancing period have been

lower than they would have been without the balancing.

The brake has been avoided

The return on the AP Funds’ capital has contributed to avoiding automatic balancing for several years, despite the fact that the AP funds constitute a relatively small part of the pension system. In 2008, however, the brake was activated as a result of large upward adjustments of pensions and pension rights the year before and the sharp decline in world stock markets. Once 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. As the financial markets recovered and the economy began to grow again, at the turn of the year 2017/2018, the system went out of the balancing period that began at the turn of 2009/2010.

read more...

More information at www.pensionsmyndigheten.se

The Fund's mission, goal and vision

Andra AP-fonden is an independent state agency that autonomously manages funds within insurance for income-based old-age pensions. Together with the other so-called buffer funds, Andra AP-fonden is part of the public pension system. The Fund's activities are ultimately regulated by law.

The assignment as a buffer fund means that AP2, with its return, will in the long term contribute to the balance of the pension system and thereby good pension development, even in times of economic and demographic fluctuations. On January 1, 2019, a revised law came into force that regulates the operations of the AP Funds and which entails changes, among other things, regarding assignments and investment rules.

The AP Funds shall manage the capital so that it will be of the greatest benefit to the pension system. They must also have the liquidity levels that the outflows from the Funds require.

Mission

The AP Funds' management mission means that the effects on pensions of automatic balancing should be limited, as it is only through this that the AP Funds' returns are linked to outgoing pensions. The Funds should generate a high return while at the same time the risk should be low, based on the development of outgoing pensions. As of 1 January 2019, the Funds' mission also includes the fund assets being managed in an exemplary manner.

The mission requires equal treatment of all generations, in compliance with the principle of 'generational neutrality'. A strong development of 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, which reflects the future value of the current pension payments.

The goal according to the law

According to law, the goal of the AP Funds is that they should manage the fund assets in such a way that they will be as much use as possible for the insurance of income-based old-age pension. The total risk level should be low. The fund assets, at the chosen level of risk, shall be invested so that high returns are achieved in the long term.

Purpose linked to the pension system

The purpose of AP2's investment activities, as determined by its Board of Directors, is to minimise the expected negative effect on future pensions that would derive from applying 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 system, the Fund chooses a strategic portfolio, 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 various assets, as well as how these returns relate to the development of the social economy and demography, are very central to 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, including costs. The return may vary significantly over time.

In the past ten years, AP2 has generated a return of 132.9 per cent, corresponding to an average annual return of 8.8 per cent. Adjusted for inflation, this corresponds to an annual real return of 7.7 per cent. For 2018, the real return amounted to -3.3 per cent.

The Fund's vision

AP2's vision, World-class management, serves as both motivation and a guide for the Fund's employees. It helps the Fund to motivate and attract employees, prioritise and make the right decisions, and covers all parts of the Fund's activities.

New legislation – exemplary management and common values

According to the revised Act for the AP Funds, which came into effect on 1 January 2019, new investment rules came into force, which among other things means greater opportunities for investing in illiquid assets (read more on pages 14 and 17). According to the law, the AP Funds must manage their funds in an exemplary way through responsible investments and responsible ownership. When managing funds, special emphasis must be given to how sustainable development can be promoted without compromising on the overall objective regarding return and risk. The AP Funds

shall work together to achieve the objective of exemplary management.

Exemplary management

AP2 shall manage funds in an exemplary way by:

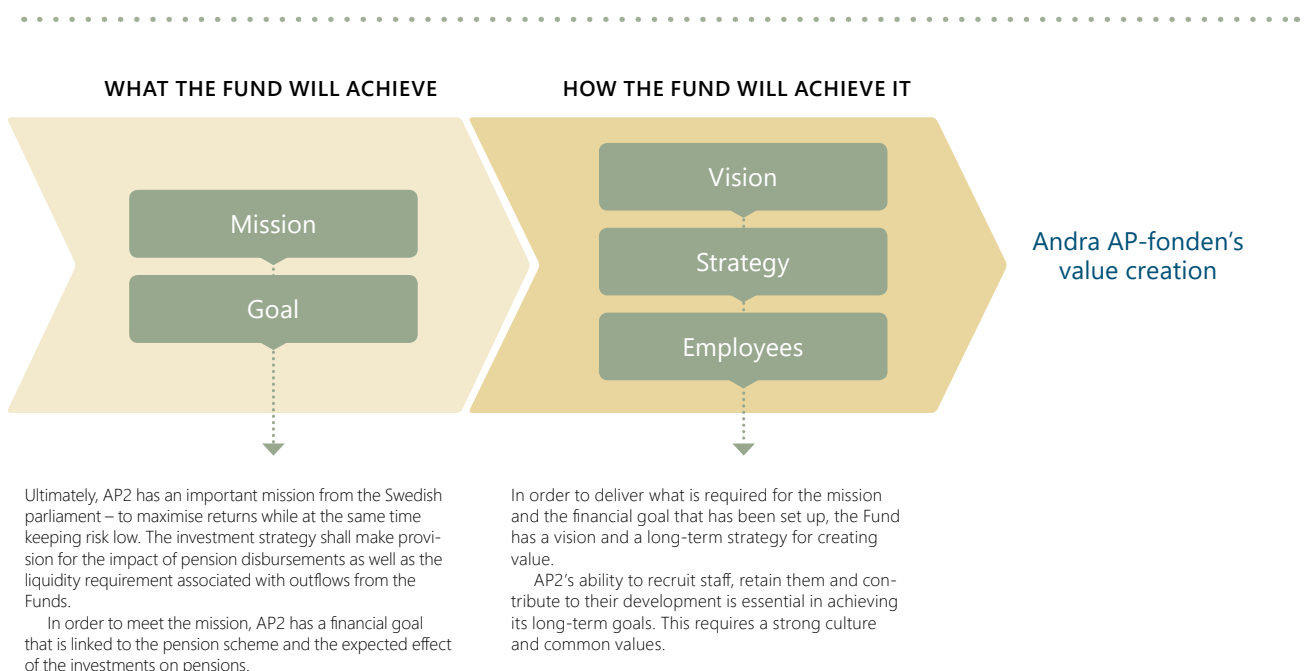
- Pursuing responsible asset management with the aim of achieving a high return in the long term at the risk level chosen based on the pension system's needs.
- Placing great emphasis on how sustainable development can be promoted in fund management without compromising the return target.
- Integrating sustainability factors, such as environmental aspects, social

aspects and corporate governance aspects as well as ethical aspects into the operations, both in the Funds' own organisations and in its asset management operations. Examples of goals and principles observed include the Global Compact, the UN's global goals for sustainable development, and the Swedish parliament's generational goal, which is the overarching goal for environmental policy and guides environmental work at all levels of society.

- Managing assets and otherwise acting to maintain public confidence in the AP Funds and their operations. This means that fund management must be effi-

cient, results-oriented and characterised by openness, which also helps to maintain confidence in the income pension system as a whole.

- Striving for a facts and knowledge-based approach, based on scientific grounds.
- Being engaged, responsible owners, entering into dialogue with the companies, other owners and stakeholders, and participating in various national and international initiatives and situations that promote good corporate governance and sustainable development.
- Being guided by common core values, which are based on the Swedish state's ethical foundations.



Common core values

The First, Second, Third and Fourth AP Funds (the AP Funds) have been commissioned by the Swedish Parliament to manage assets to the greatest possible benefit of the income pension system. Assets must be managed in an exemplary way. The AP Funds have common core values, which provide guidance for the operations. The core values are based on the Swedish state's ethical foundations and its six basic principles, all of which have a

degree of significance for the AP Funds' operations. The AP Funds have set out the meanings of these basic principles with the aim of clarifying the relevance of the ethical foundations to their operations.

- **Democracy:** The AP Funds' mandate serves the public good and is decided by Swedish Parliament with broad consensus. Therefore, it is important that the AP Funds' conduct helps to build and maintain confidence in the operations.

- **Legality:** The AP Funds' operations must be supported by Swedish legislation and also comply with the national laws and ordinances applicable in the countries where the AP Funds invest. The AP Funds shall take into account the international conventions ratified by Sweden and the international agreements backed by Sweden. The AP Funds must not have objectives related to trade policy or economic policy.

BY LAW, THE AP FUNDS MUST COMPLY WITH THE FOLLOWING INVESTMENT RULES

From 2001–2018	1 January 2019–
Investments may be made in all existing instruments on the capital market which are listed and marketable.	Same as previously.
	The First to Fourth AP Fund shall primarily acquire or hold such assets as are liquid. Liquid assets refers to money market instruments or transferable securities that are, or will be within one year from the issue, intended to be traded on a trading venue or a corresponding marketplace outside the European Economic Area (EEA), etc.
At least 30 per cent of the Fund's assets shall be invested in fixed-income securities with low credit- and liquidity risk.	At least 20 per cent of the Fund's assets must be invested in receivables with low credit and liquidity risk.
A maximum of 40 per cent of the assets may be exposed to currency risk.	Same as previously.
A maximum of 10 per cent of the Fund's assets may be exposed to an issuer or group of issuers of interrelated parties.	Same as previously.
Equities in listed Swedish companies may not exceed 2 per cent of the total market stock exchange value.	Same as previously.
The Fund may own at most 10 per cent of the votes in a single listed company.	Same as previously.
A maximum of 5 per cent of the Fund's assets may be invested in unlisted securities and these investments must be made indirectly via private equity companies or the like. The exception to these restrictions is equities in real estate companies.	At the time of the investment, a maximum of 40 per cent of the real value of the assets each of the First to Fourth AP Fund holds is placed in illiquid assets.
At least 10 per cent of the Fund's assets shall be managed by external managers.	Rule removed.

- **Objectivity:** The AP Funds shall handle conflicts of interest systematically and transparently. The AP Funds have a special responsibility to promote an anticorruption culture. The AP Funds shall also strive to take a scientific approach to their operations.
- **Transparency:** The AP Funds' operations shall be characterised by openness and the funds must provide factual, transparent information to the public. Employees of the AP Funds are

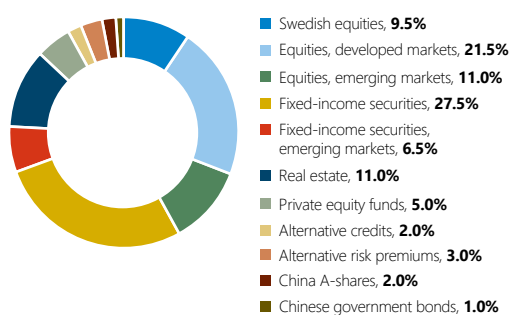
covered by the principle of freedom to supply information. Everyone is entitled to form their own well-informed opinion of the AP Funds' operations and conduct.

- **Respect:** The AP Funds treat everyone with respect. This means, for example, that the AP Funds shall not discriminate against anyone on the basis of gender, transgender identity or expression, ethnic origin, religion or other beliefs, disability, sexual orientation or age,

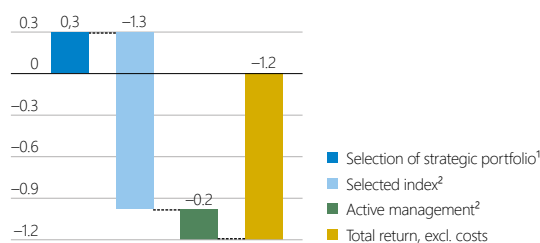
with regard to employees, business relationships or the general public. The AP Funds' conduct shall be exemplary in contacts with the public, counterparties and employees.

- **Efficiency and good service:** The AP Funds shall run the operations in a costeffective way with the aim of fulfilling their mandate in an exemplary manner. The mandate includes providing the public, media and others with services and information.

ANDRA AP-FONDEN'S STRATEGIC PORTFOLIO 2018 (% OF FUND CAPITAL)



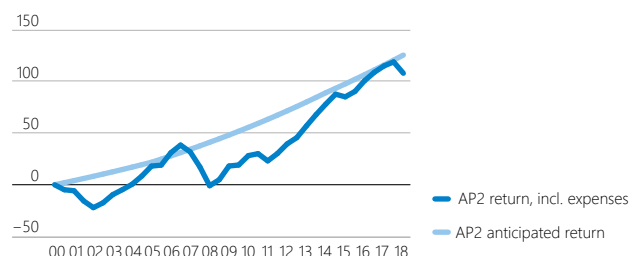
ANDRA AP-FONDEN VALUE CREATION, %



¹ Contribution from alternative investments 2.9 per cent and from market-listed portfolio -2.6 per cent.

² Market-listed assets.

ACCUMULATED REAL RETURN, SINCE START, %



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, Andra AP-fonden's chosen management strategy has generated SEK 230 billion. During 2018, the Fund implemented some changes to the strategic portfolio. Among other things, the Fund implemented new multi-factor indices for the internally-managed foreign shareholdings which, in addition to being expected to contribute better risk-adjusted returns, systematically integrates 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, the remaining 10 per cent from active management. The annual average return on the Fund's portfolio has amounted to 5.5 per cent per year since the buffer funds were started.

Value-creating strategy

AP2's strategy is based on a step-by-step approach to value generation: choice of strategic asset allocation,

selection of indices 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.

ALM model developed in-house

To analyse the dynamics of the income pension system, AP2 has an internally-developed ALM model (Asset and Liability Management). The ALM model simulates

the pension system's annual development over the chosen analysis horizon, i.e. 30 years. Based on the simulations, the portfolio composition can be identified which best meets the goal, i.e. the one that minimises the negative effects due to automatic balancing.

A key variable for the analysis is the demographics, i.e. how the population is composed and expected to develop. For this purpose, the pessimistic scenarios adopted by Statistics Sweden are used, which represent an unfavourable development of the pension system. Other variables that are central to the development of the contribution assets and the pension liability are unemployment – or, analogously, employment – and income development. When it comes to the development of buffer capital, the expected long-term returns on financial assets are central. The risk for each asset class and the pair-wise correlations between them and the socio-economic variables are also central.

AP2's Investment Beliefs

1. The financial markets are not entirely effective.
2. The valuation of equities returns to its own average over 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 creation in financial portfolios: a systematic exposure to risk premiums in the markets and value-creating active management.
5. A long-term investment time frame makes risk-taking easier.
6. An AP Fund's mission and goals create special investment opportunities.
7. By being a responsible owner and investor, values can be protected as well as created.
8. There is a premium for illiquidity.
9. People and cultures are critical success factors.
10. Stable investment processes are an important prerequisite for good results.
11. Early exposure to new strategies can create added value in the management.
12. Organisations with high cost-efficiency deliver a better long-term result.

Long-term diversification of the 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

*“A central part of these **new indices** is that they **integrate factors** relating to **ESG** directly in the index composition”*



17

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 2018, the following change was implemented in the strategic portfolio: Internally developed multi-factor indices for foreign equities. Within equity man-

agement, AP2 has deviated from traditional market-weighted indices for a long time. The intention is to increase the long-term, risk-adjusted return through systematic risk factors and premiums exposure. Previously, the Fund has applied a number of different one-factor indices in the management of foreign equities. The Fund has further developed this approach by instead developing a multi-factor indices that integrates exposure to several different risk factors within one and the same index. A central part of these new indices is that they integrate factors relating to ESG directly in the index composition, such as factors

related to carbon dioxide emissions, gender equality and pollution. For example, these new indices are expected to reduce the carbon footprint without degrading the expected risk-adjusted return. These indices were implemented in 2018.

New investment rules and higher retirement age

On January 1, 2019, new investment rules came into force. Among other things, this means that the minimum permitted proportion of fixed-income assets with low liquidity and credit risk has been reduced from 30 to 20 per cent and that the previous limitation of a maximum of

five per cent unlisted assets has been replaced with a limit of up to 40 per cent so-called illiquid assets (read more on page 14). All other things being equal, this means a space to reduce the proportion of assets with very low risk and, in the long run, low expected return.

At the same time, proposals have been presented about increased retirement age, which can have major effects on the financial position of the system. This applies to both the age from which you have the right to take out your pension and the age to which you have the right to continue working. An increase in the retirement age has major effects on the financial position of the income pension system. It is significantly improved every year as individuals on average postpone their retirement.

Choice of index

AP2 sees the index choice, that is, the composition of underlying instruments that together constitute the Fund's strategic allocation to each asset class, as an important part of the strategic portfolio. The Fund has largely replaced traditional capital-weighted indices with specialised indices, which are expected to have better properties in terms of risk and return. Examples of this are the new multi-factor indices described above.

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 endurance, active management can

increase the return compared to a completely index-controlled management. AP2 therefore works with active elements in the management. This active management is employed both in-house and via external managers. In the last five years, the average active management has generated 0.2 per cent, which is equivalent to SEK 2.5 billion.

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 active management of Swedish equities during 2018 took place within two

In-house portfolio management

The following asset classes are managed in-house:

- Swedish equities
- Equities, developed markets
- Equities, emerging markets
- Fixed-income, emerging markets
- Swedish fixed-income
- Foreign government and credit bonds in developed markets
- Global green bonds
- Tactical asset allocation
- Real estate (via directly-owned companies)
- Parts of the portfolio of alternative risk premiums.
- Chinese government bonds.

External portfolio management

During 2018, AP2 employed external management for the following areas:

- Equities, developed markets
- Equities, emerging markets
- Alternative investments (private equity funds, traditional real estate, timberland and farmland, Chinese A-shares, alternative credits and parts of the portfolio of alternative risk premiums).

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 actively quantitatively managed too, involving the use of mathematical models to create greater returns.

External portfolio management

The majority of AP2's external mandates are active. The Fund uses external managers for asset classes and mandates where the Fund does not have the internal resources required or where the external managers add value to the Fund's own management.

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.

BENCHMARK INDEX FOR THE STRATEGIC PORTFOLIO, 31 DECEMBER 2018

		Index
Equities	Sweden	SEW: 'Equal Weighted Sweden Index' CSRX: 'Carnegie Small Cap Return Index'
	Foreign equities	MSCI World 1, MSCI World Multifactor ¹
	Emerging markets	MSCI Emerging Markets ¹ , MSCI Emerging Market Multifactor 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 ^{6,7} , 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 Series A equities	MSCI, China A ¹
	Chinese government bonds	JP Morgan GBI-EM Broad China ⁶

¹ Adjusted indices, adjusted after excluded companies and tax levels.

² Adjusted indices, excluding Japan and emerging countries according to MSCI.

³ Adjusted index, excluding Russia, individual country may not weigh more than 15 per cent and not have a lower credit rating than BBB.

⁴ Adjusted index, excluding bonds with a maturity longer than 20 years and Kommuninvest.

⁵ Adjusted indices, excluding Japan and emerging countries according to MSCI, and where issued volume is below 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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⁷ Adjusted index, excluding Venezuela.

Important mission require world-class management

Andra AP-fonden will contribute to a good financial future for Sweden's pensioners. It is an important mission that the Fund takes very seriously, and which gives inspiration every day to take another step towards Andra AP-fonden's vision of World-class management. In 2018, this meant, among other things, preparing the organisation for new investment rules and continuing integration of sustainability, work which in the case of the Fund's new equity indices can be described as pioneering.

AP2's management is based on the purpose of being of the greatest possible benefit for the state income pension system. To achieve this, the Fund bases its management on three principles: risk diversification, cost efficiency and sustainability.

"We work hard to generate a good return to the income pension system without taking unnecessary risks. And we make it cost-effective and long-term because our investments are made in a sustainable way. In this way, our portfolio is most beneficial to the pension system," says Hans Fahlin, Chief Investment Officer at AP2.

Three guiding principles

AP2 is constantly working to spread the risks between different asset classes and markets worldwide. Over the past decade, this work has created a significantly more diversified portfolio. The Fund achieves high cost effectiveness by, among other things, managing much of the capital itself with modern technologies. International comparisons have also shown that AP2 is very cost-effective.

"The fact that comparisons in the industry show that we are cost-effective is good, but we cannot settle for just that. In recent years, we've succeeded in reducing the share of costs of our managed capital, even though the portfolio has become increasingly complex with more asset classes and markets," explains Hans Fahlin.

As a long-term manager, it's important for AP2 to protect the values that the Fund invests in, and that the value of the investments is sustainable in the longer term. By integrating sustainability into management, the Fund can identify assets that are incorrectly priced because the value may change, for example due to climate change.

"We've made great progress in the area of sustainability, but it's not easy and sustainability is a process that we will never be finished with. It's a prioritised area and we're always working to take these aspects into consideration," says Hans Fahlin.

Changed investment rules

In 2018, AP2 worked hard to prepare the organisation for the AP funds' new investment rules. In the new rules, the AP Funds are given greater opportunities to invest in illiquid, or alternative, assets that have in common that they are difficult to sell quickly or that this is associated with high costs. A long-term investor is compensated via the possibility of higher returns. Another important change is that the requirement for a minimum proportion of fixed-income securities with low credit and liquidity risk is reduced from 30 to 20 per cent.

"We welcome both these changes. As a long-term investor, we have the best conditions to get the extra return that alternative investments provide. At

the same time, the low interest rate levels of recent years have meant that fixed-income securities have had a low return," explains Hans Fahlin.

Private equity investments

In 2018, AP2 analysed the consequences of the new investment rules for the Fund's portfolio. The Fund has, among other things, investigated investments in private equity, an area where AP2 has previously had good experience. In this work, the Fund's own empirical experiences and data have been used and there is also good access to academic research on the subject.

Another area that AP2 has investigated is infrastructure, which is often described as a stable investment. However, there is relatively little academic research and empirical data that explains this. The Fund, after analysing research and data, has instead concluded that infrastructure is often reminiscent of private equity investments with high risk and the possibility of high returns.

"We will keep looking at whether infrastructure investments can have a place in our private equity portfolio. In addition, we will analyse climate-improving investments, for example in electricity production. Here there are opportunities to find investments that can yield a good return while at the same time helping to finance the transition to a fossil-free society," says Hans Fahlin.



Hans Fahlin,
Chief Investment Officer at AP2

Bonds with higher credit risk

A third area analysed by AP2 is bonds with a higher credit risk. The Fund's analysis shows that such an investment co-varies more with equities, and thus can be regarded as an interim between equities and bonds.

"Our analysis shows that the possibility of a good return compensates for the increased risk, and therefore it's an interesting type of asset. However, we need to investigate how this type of investment can fit into our portfolio. Emerging market bonds issued in dollars, which the Fund already manages, can be an equally attractive option," says Hans Fahlin.

Continuous work on integrating sustainability

The new investment rules for the AP funds also include changes in the sustainability area.

"We believe that our focus on sustainability is already in line with the new law," says Hans Fahlin.

AP2 views sustainability as being based on a conviction that it leads to a better management result, and thus that it becomes better for the income pension system and for pensioners. The Fund's overall focus on sustainability work is therefore to integrate sustainability into management.

"For each management unit, we have projects on sustainability in our asset classes. We try to continuously identify improvements in how we deal with risks

and opportunities within sustainability in all asset classes," explains Hans Fahlin.

Important to succeed in the mission

For many years, AP2 has actively worked on developing within the sustainability area. Among the Fund's employees, there is a consensus that joint work on these issues is good for the pension system and important for the success of the Fund's mission. A fundamental success factor is that, in this work, AP2 has been open to change and dared to go its own way.

"What we do is not controversial, and there are several others who also do this. But we are good at sustainability because we do our analysis properly, and when we've reached what we think is best for the pension system, we make the changes that are required," says Hans Fahlin.

Changes in the pension system

In parallel, AP2 has also analysed the effects of other changes that affect the development of the pension system. The system has now recovered after the financial crisis and the financial position is good today, partly because of the AP funds' good returns. In the demographic scenario from Statistics Sweden, which the Fund uses as a basis, the forecast is now also less pessimistic than before. In addition, proposals for higher retirement age have been presented, which can be expected to strengthen the system in the long term.

"The overall picture in the Fund's simulations of the pension system is brighter than before, which plays a role in how our portfolio should look in order to create as much benefit as possible in the system. With the help of our ALM model, we have, among other things, analysed the effects of the higher retirement age. The uncertainty is, of course, still a large factor in this matter and we will need to analyse the effects on an ongoing basis," says Hans Fahlin.

World-class management

AP2's vision is World-class management. The vision expresses the Fund's aim of constantly looking to develop and become better by learning from market developments and what other players are doing.

"There are elements in what we do that can be considered world-class, for example our way of working cost-effectively with emerging markets and developed markets, while incorporating sustainability aspects. And our new internally-developed indices for global equities in the quantitative management, which have attracted a lot of international attention, have been described as pioneering by many. At the same time, we need to continue to develop in all areas. World class is a constant aim of ours," concludes Hans Fahlin.

read more...

A review of AP2's sustainability activities and measures in each asset class in 2018 can be found on pages 28–55.

Indices with sustainability focus

In February 2018, when Andra AP-fonden implemented two new indices in quantitative management, it was an important step in the Fund's efforts to integrate sustainability into the portfolio management. It was also the result of long research efforts and a lot of work. With several positive effects from the indices, the work will continue in 2019.

AP2's new indices was implemented in the asset class, global equities, in the quantitative administration, which amounts to approximately SEK 87 billion. In the two indices, one for developed markets and one for emerging markets, ESG factors (Environmental, Social and Governance) have been given great importance.

"We've worked intensively with ESG for many years and for a couple of years with integrating ESG into our indices. It's satisfying to see that the hard work has resulted in a more sustainable portfolio which is also expected to have a better return in relation to the risk," says Tomas Morsing, Head of quantitative strategies at AP2.

the data required. Although each part is not always very complicated, the totality has to exist," says Claes Ekman, Quantitative portfolio manager at AP2.

Another factor that simplified the work is that AP2, which is a relatively small organisation and gathered in one place, has short decision paths and great freedom to develop projects like this.

"Our skilled employees have been a crucial factor. We've also had good support internally with strong support from the board and management to push these issues forward," says Tomas Morsing.

Long-term investment for a more sustainable portfolio

The mission of the AP Funds states that sustainability has to be taken into consideration. Therefore, it was natural for AP2 to implement ESG factors also in the quantitative management. At the same time, it's a long-term investment that has required large resources.

Experiences and employees decisive

The fact that AP2 has been conducting quantitative management since 2002 is an important explanation for the fact that the Fund has succeeded in this large and complex project.

"Through our long experience of quantitative management, we've gathered the knowledge, the methods and

Several positive effects

Carbon dioxide footprint is the only standardised measure to evaluate the effect of an index on the sustainability area. After just one year, it's clear that the new indices have contributed to a significant reduction in AP2's carbon footprint.

"For us, ESG factors are interesting, and important to consider in our investments. We see clear indications that the world is not developing as it should, and this is our way of having an influence. We know that we've included factors that actually contribute to improvement," says Claes Ekman.

With just two indices instead of six, the internal administrative work has also decreased and been simplified, which

Several positive effects with the new indices

- Reduced carbon footprint compared to previous indices by about 40 per cent in the index for developed markets and about 30 per cent in the index for emerging markets.
- ESG and sustainability factors are taken into account even more in the investment process than previously.
- More well-diversified portfolio which contributes to a better risk spread.
- Better expected absolute and risk-adjusted returns.
- More cost-effective internal management.
- Lower transaction costs in the form of reduced trading in index rebalancing and lower cost against index supplier.

“We see this as an iterative development work where we research, refine and improve as we come up with new and better ideas”

has contributed to lower costs. After only one year with the new indices, it is too early to draw any conclusions about the return. But in AP2's tests of historical data, a better expected, absolute and risk-adjusted return is achieved than with the previous indices.

“For an evaluation of the return to be relevant, a period of at least five years is required, preferably longer. But we feel confident that our work, in addition to being good from a sustainability perspective, will also yield a good return,” says Tomas Morsing.

Since AP2 started with the underlying data in the development of the new indices, much greater consideration is given to the sustainability in the investments.

“When we constructed the indices, we had access to many ESG factors, where, in a concrete and simple way, it was possible to read how the companies have influence in different areas. In this way we were able to select the factors that were important for us to influence and contribute to a sustainable world,” says Claes Ekman.

A lot of interest from the outside world

The interest in the new indices has been great. The Fund's employees have also been invited to be lecturers and participants in various contexts.

“A lot of players from all major markets around the world want to learn more and cooperate with us. This shows that we are at the forefront in this area,” says Tomas Morsing.

Internally-developed indices

The large interest from the outside world can also be explained by the fact that it is AP2's employees who have developed the new indices instead of an index provider.

“We wanted to construct the indices ourselves. But it requires functioning internal processes and a good partnership with the supplier of the data documentation, which many take for granted. We have worked hard on these parts and during the year it has been confirmed that it works the way we want,” says Claes Ekman.

Innovative working method

The most common way of working with ESG management is through exclusion, that is, choosing not to invest in companies based on sustainability factors. In addition to exclusion, AP2 also works with the investment decisions by weighting companies based on ESG factors.

“Complementing exclusion with weighting, we think is a more nuanced and better way of working. We are ahead with this, which has meant that large investment banks, for example, want to cooperate with us,” says Tomas Morsing.

Continuous development for better pensions

AP2 is constantly reviewing the indices to identify possible improvements.

“We see this as an iterative development work where we research, refine and improve as we come up with new and better ideas. In addition, the circumstances change, not least in this industry. We are responsive and act on it,” says Tomas Morsing.

AP2's sustainability focus will be clear in the projects that the Fund will implement in the future. In the next step, AP2 will begin in 2019 to develop indices that takes into account ESG factors also in the quantitative management of bonds.

AP2 operates in an ever-changing world with major challenges, such as climate change. One of the Fund's projects is about identifying companies that can manage this change, but above all have solutions to future challenges. In another project, AP2 will use AI, artificial intelligence, to identify companies that distinguish themselves in different areas.

“For us as asset managers, these companies can be interesting investment objects. We want to identify such companies and then analyse different factors to determine if they contribute to our continued work on delivering sustainable and strong pensions,” says Claes Ekman.

Employees with high levels of competence and strong commitment

Andra AP-fonden's ability to recruit staff, retain them and contribute to their development is essential in achieving its long-term objective. 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 staff are critical to a successful result. As a manager of buffer capital, the Fund is tasked with an important mission. 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 works actively on issues such as gender equality, diversity, work environment and discrimination. The work is based on the Fund's discrimination policy, gender equality and diversity plan and working environment policy. All employees are informed at employment of the Fund's policies and guidelines. The Fund also maintains ongoing dialogue on these issues.

Culture and values

During the year, the Fund continued its work on building a strong culture and strengthening the common values: long-term value creation, responsibility, respect and continuous improvement. This process is intended to clarify and promote consensus around the Fund's val-

ues 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.

Work to prevent corruption

AP2 has zero tolerance on corruption and works continuously on preventive work. The Fund has, among other things, an ethics policy, a compliance policy and a hospitality policy that prescribes how the Fund's employees should act on these issues.

The preventive work is driven by the Fund's compliance function and is carried through, among other things, training and the development of internal documents. AP2's managers are responsible for ensuring that their employees understand and act in accordance with the policies. This is done continuously through information, discussions and conversations. At the same time, all employees are responsible for applying the policies. AP2 has a so-called whistle-blower function, which employees can anonymously report to on for example unethical behaviour. The Fund's gen-

eral counsel has overall responsibility for the follow-up of how the guidelines are complied with and reports to the Board on important ethical issues concerning the activities and the employees' 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.

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 Nuveen. 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 at the Fund's website.

*“Active **equality and diversity** work within the Fund contributes to **increased motivation** and **well-being** among the employees”*

Leadership training

A clear leadership that complies with AP2's values and management practices is an important competitive tool. Being a leader at AP2 means living up to requirements and expectations from both management and employees. The leader's task is to create results by developing the employees and the business and creating the conditions for employees to feel motivated. During this past year, all managers have undergone leadership training in developing leadership, UL.

Work environment and health

AP2 strives for a work environment that is so good that every employee thrives and can develop in their work. It should also be an environment that minimises risks. Therefore, it is important that all employees can influence their own work situation. A nice and pleasant work environment is a prerequisite for the Fund to be able to achieve its goals and be an attractive employer. AP2 conducts systematic work environment efforts by examining, correcting and following up the physical and psycho-social work environment.

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 encourages a healthy and sustainable lifestyle and works actively to create a high level of well-being.

Diversity

AP2 sees the strength in diversity and an inclusive approach. 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 within the Fund contributes to increased motivation and well-being among the employees, which in turn increases the Fund's competitiveness and possibility to generate good returns. It enables men and women to combine work with family responsibilities by offering flexible working hours and working

under one's own responsibility. In 2018, four men and two women took parental leave at some point during the year.

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.

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. This addresses the actual decision-making process as well as the construction and appraisal of appropriate and reason-

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 be mentors, to assist academics with foreign backgrounds without employment that corresponds 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.

*“The Fund is therefore continuously working on **competence development** with the aim of **developing** the operations and **achieving** set goals”*

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able 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. This has created a solid

recruitment base for future employees. Eleven of the Fund's current members of staff have come direct 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 skills and experience required for the operations to be run in the best possible way. The Fund's ability to retain competent and committed employees is crucial for driving development in accordance with the strategic plan and achieving set goals. If the Fund does not have access to the

right skills at the right time, operations and results can be adversely affected.

The Fund is therefore continuously working on competence development with the aim of developing the operations and achieving 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 with the purpose of improving the quality of leadership throughout the business. In order to identify focus areas that are expected to increase employee satisfaction and commitment, the Fund conducts regular employee surveys.

AP2's new variation-based office

In 2018, the Fund has rebuilt its premises and gradually switched to a more variation-based approach. This means a greater flexibility in choosing a workplace based on the current task. The advantages are that the employees get an increased understanding of each other's work, it is easier to meet and communicate, which strengthens the culture and the Fund's values such as constant improvement. With the new office solution, the Fund will reduce costs through more efficient use of the premises and create a more inspiring and more sustainable office.

read more...

Read more about remuneration on page 86, as well as on the Fund's website.

Some thoughts on the new variation-based office

Joakim Lundgren, System manager Business Analysis

"I think the new office gives me the opportunity to choose the zone that is best suited for the tasks I plan to work on through the day. There'll also be a better circulation regarding which colleagues you get as 'neighbours' each day."

Christoffer Grände, Chief strategist

"For me who works a lot of the time outside the office, a variation-based office fits me very well. I work completely paperless and always have access to my things via our IT solutions – whether I'm sitting in the office, the train, at home or anywhere else."

"Once I'm in the office, I can cooperate with a lot of different parts of the organisation. Being able to vary with whom and where I sit is really valuable."

Yvonne Janslätt, Accountant

"Working in a variation-based office means greater freedom to sit where it best suits the day's task, for example if you are two people working on something special, you can find places next to each other."

"We now have gym balls to sit on, armchairs, and different types of meeting rooms with, for example, standing tables, which is an advantage for stiff-backed office workers."

Andra AP-fonden's sustainability work

Andra AP-fonden'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 an asset manager, the Fund's objective is to address a range 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 working to maintain a high level of trust and 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 and corporate governance issues in AP2's activities, values can be created and protected. The term that the Fund uses to embrace these issues is sustainability. The abbreviation ESG (Environmental, Social and Governance) is also used by investors. By including sustainability aspects in analyses and investment processes provides the Fund with broader and better decision data.

Andra AP-fonden's framework

AP2 is a state agency whose activities are regulated in the Act (2000:192) concerning Swedish National Pension Funds. The law has been amended as of 1 January 2019. The AP Funds' mandate includes generating a high rate of return while maintaining a low level of risk. The investment strategy shall make provision for the impact on pension disbursements as well as the liquidity requirement asso-

ciated with outflows from the Funds. It is important that AP2 has the trust and confidence of the public and acts in a responsible manner. The revised law states that the AP Funds shall manage the fund assets in an exemplary manner through responsible investments and responsible ownership.

Both sustainability and responsible ownership are a high priority for the Fund. A proactive approach to the environment, ethics, social issues and corporate government are means to attain the goal of a high-adjusted return.

Sustainability and governance policy

AP2's operative work on sustainability and governance issues is based on the Fund's corporate governance policy and its ten principles. These principles cover structural issues, corporate governance as well as environmental and ethical issues. The corporate governance policy also describes the principles that the Fund has adopted

and guidelines and initiatives to which the Fund has signed up or uses in its sustainability work. The corporate governance policy is determined annually by the Board and is published on the Fund's website.

The corporate governance policy clarifies what AP2 expects from companies in which the Fund invests, but also what companies can expect from the Fund as an owner in the company. Regulations and conventions such as the OECD's guidelines for multinational companies and corporate governance, the UN's Global Compact, the UN's Principles for Responsible Investment, the UN's Guiding Principles on Business and Human Rights, the Swedish Companies Act, the Swedish Code of Corporate Governance and other specific codes of corporate governance such as the ICGN Global Stewardship Principles and the UK Stewardship Code together with the EU's work on Sustainable Finance form the basis for AP2's work on governance issues.

The Fund's definition of sustainability

For AP2 sustainability work emanates from the Fund's mission and entails a long-term initiative to protect and build value in investments – from an economic, environmental and social perspective.

Implementation of PRI

AP2 supports and works to implement the UN-supported Principles for Responsible Investment, PRI. The Fund signed these principles already in 2006 when they were launched. Implementing these principles is a constantly ongoing process where consideration for sustainabil-

Andra AP-fonden's management of sustainability-related issues

Decision level	Category	Governing documents	Follow-up	Goals and outcomes 2018	
THE BOARD OF DIRECTORS	Strategy	Operating plan, including governance policy and sustainability policy	This is followed up by the Board and the executive management.	Goal: Long-term average annual real return of 4.5%.	Outcome: In five years, 5.9%; in ten years 7.9%.
	Return		Followed up by the Board and executive management and are reported in the annual report and half-year report.		
	Conduct rules	Ethics policy	The General Counsel has overall responsibility for following up how the guidelines are complied with and reports to the Board on important 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 32.	Outcome: See page 32.
		Financial sustainability areas		Goal: Increase number of train journeys Göteborg–Stockholm. Reduce print-outs.	Outcome: See page 56.
		Environmental policy			
	Staff manual	HR policy	The CEO is responsible for ensuring that policies and plans are drawn up. The overall work is planned and followed up by the HR manager.	Goal: Increase the proportion of female managers at AP2.	Outcome: 33 (35) %.
		Equality and diversity plan			
		Discrimination policy		Goal: No employee of AP2 shall be exposed to discrimination.	Outcome: 0 cases.
		Work environment policy			
		Hospitality policy			

ity issues is taken in both the Fund's role as asset manager as well as its role as asset owner. PRI provides a variety of tools and activities to support investors to implement the principles and to facilitate cooperation among investors. Around 2 000 investors have signed up to these principles. PRI carries out an annual survey where all signatories report how they are working to implement the principles. AP2's response to the survey is available on both the PRI's and AP2's websites.

AP2 also follows the PRI's Guidance for Responsible Investment in Farmland. These were drawn up in 2011 by AP2 and a group of international investors. AP2's reporting on the implementation of

these principles can be found on the Fund's website.

Organisation and responsibility

AP2's Board determines guidelines and policies in governance issues and has mandated the CEO of the Fund to manage these in the ongoing operations of the Fund. The ongoing operations are managed by the AP2's Sustainability Committee which is comprised of all members of the Fund's executive management and the Fund's senior sustainability analysts. The Sustainability Committee is the Fund's project organisation for sustainability. Operationally, the work is carried on primarily within the Fund's asset management organisation.

The Fund also has a Sustainability Forum for all its employees. The purpose of this forum is to exchange experience and knowledge within the sustainability field.

The ongoing work of corporate governance is carried out by the Fund's corporate governance group which is comprised of members from the Fund's executive management and the Head of Swedish Equities. The group defines targets and action plans and continually follows up how the Fund's corporate governance work is progressing.

AP2's Board receives a report at each board meeting about the Fund's sustainability and corporate governance work.

The UN's Sustainable Development Goals

In September 2015, the 193-member states of the UN unanimously adopted 17 global sustainable goals. The goals, to be achieved by 2030, aim to end poverty and create a sustainable world. The 17 global goals have been divided into 169 sub-targets measured by various indicators.

Each country is responsible for implementing and following up the sustainable goals. To achieve the goals, it is required that governments, civic society and business and industry work together.

The 17 sustainable goals are integrated and indivisible, which means that no target can be reached at the expense of any other one and that progress is required in all areas in order to achieve the goals. AP2 has chosen to express its contribution in terms of the Fund potentially contributing to the goals through its sustainability work and several of the investments the Fund makes. In the long-term, the Fund will be able to measure this contribution and work is in progress within GRI (Global Reporting Initiative) and PRI (Principles for Responsible Investment), among others, to establish indicators for investors.

Examples of investments

AP2 has invested in the private equity fund The Rise Fund, which is managed by TPG Growth. The Rise Fund manages USD 2.1 billion of assets, primarily for global institutions, which makes it the largest so-called impact fund that has ever been set up. The objective of the Fund is to achieve measurable, positive social and environmental results and financial returns comparable with the market. All investments shall have a positive effect on at least one of the UN's global sustainable goals. The Rise Fund measures the specific size of the impact a potential investment is expected to have during its investment cycle, with focus on the impact result as defined by the UN's global sustainable goals. AP2 has also invested in social bonds that are directly linked to at least one of the UN's sustainable goals.

Active commitment

AP2 is also committed to the goals in other ways. The Fund's CEO, Eva Halvarsson, has reported on a number of occasions how the Fund's investments contribute to the goals, including at the PRI annual conference. Eva Halvarsson has also made a number of interviews, chiefly in international media, about the work of the Fund.

The Fund's sustainability analysts are also on the PRI Advisory Committee concerning the UN's global sustainable goals.






AP2, together with some of Europe's major pension managers, has signed a position on the importance of international investors investing in solutions that contribute to the UN's sustainable development goals. The Fund believes it is important to have a common definition of "Sustainable Development Investments" and encouraged in the position other major institutional investors to take similar initiatives.

The Fund has also signed the "Stockholm Declaration" initiative. Through the initiative, both Swedish and international investors declared that the UN's sustainable development goals shall constitute a central framework for working with current investments towards 2030.

Largest expected impact

AP2 has chosen to report a selection of its investments, and which goals it is expected they will have the greatest impact on, using the document that the Dutch pension managers, APG and PGGM, have drawn up – Sustainable Development Investments, Taxonomies. The Fund's ambition is to develop this in the long-term. In the Council on Ethics's report, which will be published in spring 2019, the AP Funds will report which sustainable goals the Council on Ethics' dialogues have the greatest potential to impact.

EXAMPLES OF ANDRA AP-FONDEN'S INVESTMENTS WITH CONTRIBUTIONS TO THE UN'S SUSTAINABLE DEVELOPMENT GOALS

The UN's sustainable goals	The 169 sub-targets, 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.
	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.

A selection of Andra AP-fonden's sustainability goals

Focus area/access class	Goal	Follow-up method/ Key indicators	Achieved 2018	Shall be achieved
ESG integration				
Swedish equities	Follow-up and evaluation of the sustainability work for the ten largest Swedish holdings, based on the Fund's ownership share	Analysis and dialogue shall be carried out		2019
Global equities	Implement multifactor indices with EGS factors	Implementation done	✓	2018
Fixed-income assets	Investigate the opportunity to integrate further ESG factors for corporate bonds	Analysis carried out		2019
Private equity funds	Develop system support for follow-up of ESG	Model developed	✓	2018
Reporting				
Traditional real estate	That the Fund's unlisted real-estate companies and funds respond to GRESB's questionnaire 2018	Percentage of companies/funds that responded to the questionnaire	✓	2018
	That the Fund's unlisted real-estate companies improve their overall GRESB score (the maximum is 100)	GRESB-score	86 (74)	Annually
Other	Develop AP2's reporting on human rights	Extended information on the Fund's website	✓	2018
Climate				
	Develop the Fund's knowledge on the impact of farmland investments on the carbon footprint	The Fund's carbon footprint		2019
The Fund shall have a portfolio in line with the Paris Agreement	Develop methods for measuring whether the portfolio is in line with the Paris Agreement	Methods developed		2021
	The Fund shall report in accordance with TCFD's framework	Report published	✓	Annually
	The Fund shall carry out scenario analyses to identify financial climate risks and opportunities	Analyses carried out		2019
Diversity				
Swedish equities	That the percentage of women shall increase on company boards where the Fund participates on the nomination committee	Percentage of women on the board	See table on page 57	Annually
Corporate governance				
Swedish equities	Vote in all companies that fulfil the Fund's criteria for participating in general meetings	Percentage of companies in which the Fund has voted	✓	Annually
Global equities	Vote at 750 international general meetings	Number of companies in which the Fund has voted	✓	Annually
	Write 50 follow-up letters to companies where the Fund has voted against the proposal of the Board	Number of letters that the Fund has sent	✓	Annually

Stakeholder dialogue and materiality analysis

The AP Funds' have an impact on people, the environment and society through their operations. In order to identify the most important sustainability issues, the First, Second, Third and Fourth AP Fund carried out a materiality analysis in 2017.

Stakeholder dialogue

A key part of the analysis is a dialogue with representatives of the Fund's most important stakeholder groups who are impacted to a large degree by or who themselves impact of the Fund's operations. The stakeholder dialogue was carried out in the form of a workshop. The Fund's objective with the workshop was to identify stakeholder expectations and priority issues, get feedback on the Fund's current sustainability work and to learn the views of stakeholders in regard to the ongoing sustainability work.

All stakeholder groups held the view that what is most important is the AP Funds' actions in investment and management in view of the fact that the most significant impact is in these areas. Long-term returns were seen as an overall goal and not as a specific sustainability goal.

Materiality analysis

It was established that the selection of priority sustainability issues varies between the different companies and funds in which the AP Funds invest. However, three issues were highlighted as being particularly important and given highest priority:

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

Each AP Fund works to refine the priority of sustainability issues on the basis of its own prerequisites.

Cooperation with other investors

In addition to the cooperation between the AP Funds in the Council on Ethics, AP2 works with other Swedish and international investors. During the year, the Fund has also exchanged experience on the environment, ethics and corporate governance within asset management with others including the Swiss federal pension fund, PUBLICA, and a number of other parties within the Fund's network. AP2 is also a member of and supports a range of Swedish and international initiatives concerning the environment, ethics and corporate governance. The Fund works with other investors to influence new legislation, primarily within corporate governance. This cooperation is becoming increasingly important in order to be able to influence and bring about change, and thereby to improve shareholder value in the long term.

Collaboration on climate issues

AP2 works with other European investors on climate issues through membership of the IIGCC (Institutional Investors Group on Climate Change). One of the Fund's employees is also a member of the IIGCC Board. The aim is to promote investors' views on climate issues and to engage with companies, authorities and other investors in order to highlight long-term risks and opportunities that arise in connection with climate change. Climate issues are important for AP2 as a long-term investor. Currently, there is great uncertainty in regard to future regulation and frameworks for

reducing emissions of greenhouse gases and stimulating alternative energy sources. This makes it more difficult for companies to make profitable investments and for investors to calculate risks and returns. IIGCC is an effective platform for expressing investors' wishes in the climate field. It is also a good way for the Fund to obtain the latest information about various climate-related investments. Read more at www.iigcc.org

More information about AP2's membership and initiatives are available on the Fund's website.

Education and training on sustainability

During the year, all employees have undertaken education in sustainability issues. All members of the Board have also undertaken education in sustainability issues. This education has included current trends within the sustainability field, the UN's global sustainability goals, what is taking place globally within the finance sector, AP2's sustainability work and the work of the Council on Ethics.

Awards

In 2018 AP2 received, for the second year in a row, an international award from Responsible Investor in the category "Best sustainability report, asset owners, large funds".

Dialogue as the primary tool

As an active asset owner and asset manager, dialogue is an important tool both in relation to companies and to society in general. Andra AP-fonden has regular dialogue with its external managers and with Swedish and international companies concerning the environment, ethics and corporate governance.

Collaboration with other investors is important in order to achieve progress in dialogue with companies, but also to promote a development towards responsible investment. AP2 works with both Swedish and international institutional investors.

Council on Ethics

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.

Work to prevent corruption

The work to prevent corruption is and will remain an important issue for the Council on Ethics to drive forward since corruption undermines the legitimacy and sustainability in the economic system. The Council on Ethics carries on dialogues with a large number of companies, and in principle all proactive projects with which the Council on Ethics works include anti-corruption issues.

The Council on Ethics's annual report for 2018 will be published in April 2019. Read more at www.etikradet.se

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.

According to the new legislation for the AP Funds, which came into effect on 1 January 2019, the Funds shall draw up common guidelines for which assets the Funds should not invest. These guidelines are published on AP2's website.

From an earlier date, AP2 decided to exclude 17 companies that are in breach of international conventions and where dialogue with the company has not led to any improvement. The Fund publishes a list of these companies unlike when the Fund divest from companies when this is purely a financial decision. Information about which companies AP2 has excluded can be found on the Fund's website.

In order to follow up the financial contributions of the exclusions, AP2 has designed a method for comparing the return for the indices MSCI World and MSCI EM, excluding and including the excluded companies. The return contribution is –0.27 (–0.27) per cent after having excluded companies as a result of breach of conventions, that are included/have been included in MSCI World since 2006. These exclusions are equivalent to 0.9 per cent of MSCI World as per 31 December 2018 and total 21 companies in all during the period 2006 to 2018. For MSCI EM, the return contribution is –0.43 per cent after having excluded companies that are included/have been included in MSCI EM since 2007. These exclusions are equivalent to 0.8 per cent of MSCI World as per 31 December 2018 and total eight companies in all during the period 2007 to 2018.

Focus areas

AP2's sustainability work is concentrated primarily on some prioritised focus areas that the Fund considers to be important for a better long-term return. The aim of focusing the Fund's resources on a number of areas is to achieve results within areas that are financially significant.

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, since the Fund has worked on these issues for a considerable period. The Fund also expects to work with these areas for a long time in the future.

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. The reason for this is that the Fund shall focus on areas and companies which are financially the most important for the Fund. This can be carried out in cooperation with other investors to achieve improvements

for an individual company and/or within one sector. The work on focus areas is also carried out internally. It is in this way that the Fund primarily can achieve the overall goal that sustainability shall be integrated in all analysis and decision processes, which is also in line with the Fund's mission.

Goals broken down in the long and short term for the respective focus areas and activities for achieving the goals are specified in the Fund's annual business plan for sustainability and in the action plans for each asset class.

read more...

Read more about the Fund's work on the focus areas on pages 36–55.



Sustainability in the investment process

Considering sustainability factors in analysis and decision-making processes means integrating sustainability in the portfolio management. In this way, the Fund can also reduce the risk and obtain better prerequisites for increasing the return. Andra AP-fonden's view is that long-term sustainable companies are also companies that can generate good returns in the long term.

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

Sustainability – a part of management strategy

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

AP2 is responsible for both management and governance of the assets in its care and is actively engaged in environmental, ethical and corporate governance issues from both perspectives. By encouraging portfolio companies to address ethical and environmental issues, the Fund can help portfolio companies to identify opportunities and risks at an early stage in these areas, and which impact on returns.

AP2 believes that a long-term responsible approach to the environment, ethics, social issues and corporate governance increases the value of a company. Integrating the economic analysis with the analysis of the environment, ethics and corporate governance into asset management creates a better basis 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.

Risk system that includes sustainability

AP2 has integrated a sustainability module in the Fund's risk management system, which means that sustainability data for listed companies is now easily available. With the help of the integration, the Fund can measure and evaluate the portfolio's sustainability by analysing exposure as well as risk and return attribution. For example, the Fund can meas-

ure and report how its strategic choice of benchmark indices and the active management affect the sustainability profile.

Equities

Swedish equities

Fundamental analysis is used in the management of Swedish equities. In the analysis of companies, consideration is given to sustainability aspects and how they can affect company valuation. These could be, for example, tax issues, coming environmental regulations and corporate governance issues. AP2 believes that companies can both create and protect values by working on sustainability issues. By being an active owner, the Fund can affect companies and support them in the development of their sustainability work. For example, the Fund participates in nomination committees, votes at shareholders' meetings and raises specific issues with companies. During the year, AP2 has had a number of dialogues with Swedish companies about their sustainability reporting.

Global equities

AP2's management of global equities is largely through an active intern quantitative management. In 2018, AP2 replaced all existing indices for the internal management of global equities. The new multi-factor indices have been developed internally. The factor to

*“A proactive approach to the **environment, ethics, social issues** and **corporate governance** are means to attain the goal of a **good risk-adjusted return**”*

Integration of sustainability in the investment process

Asset class	Mapping	Implementation	
		1. Integration in analysis and decision-making processes	2. Internal monitoring/ external reporting
Equities			
Swedish equities	●	●	●
Foreign equities	●	↑ ●	●
Interest			
Fixed-income securities	●	↑ ●	●
Fixed-income securities emerging markets	●	↑ ●	●
Green bonds	●	●	↑ ●
Alternative investments			
Real estate			
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 carried out a situation analysis and identified continued development opportunities.

Implementation

1. *Integration in analysis and decision-making processes* – The Fund’s assessment of the extent of integration. For externally managed capital, sustainability must form a part of the agreements.

2. *Internal monitoring/external reporting* – Follow-up of the Fund’s sustainability work (incl. external managers).

● Yes

● Partly

● No

↑ Change compared with the previous year

which the index has greatest exposure is an internally developed sustainability factor which is linked to a number of environmental factors, social factors and corporate governance factors. Read more about the Fund's multi-factor indices on pages 22-23. Further elements of sustainability are found within the active

quantitative management in relation to these indices.

AP2 has made divestments in global listed companies that the Fund has determined to have financial climate risks. This work is based on comprehensive sector and company analyses where sustainability issues and financial information is woven

together. The Fund has so far investigated the utility sector, the coal sector and the oil and gas sector. In total, the Fund has divested in 83 companies.

AP2 also has externally managed mandates within global equities, including Chinese A-shares. There are sustainability challenges associated with invest-

Human rights

Andra AP-fonden is actively working to take human rights into consideration in the entire business operation and to further develop the Fund's integration of these issues into the investment process. The Fund's Board of Directors adopted a human rights policy in 2017 and the Fund has conducted training relating to these issues for all employees. To improve its understanding, the Fund has a cooperation with Shift, which is the leading organisation in terms of knowledge of the UN's Guiding Principles on Business and Human Rights.

The UN's Guiding Principles are a global standard that clearly sets out companies' responsibility to respect human rights. According to the principles, a company must have processes to identify and manage its human rights risks, to follow up on them and to communicate the results. According to the principles, it is important that companies take both a reactive and proactive approach, which means that companies must both react when there is a negative impact on human rights and take preventive measures to reduce the risk of negative impacts occurring.

AP2 currently takes both a reactive and proactive approach. As part of the Fund's reactive work, all the companies in AP2's equity portfolios are screened twice a year in order to identify companies that are in breach of international conventions and guidelines. This screening is carried out by an external consultant and forms the basis for the dialogues maintained by the Council on Ethics of the AP Funds. Read more about the work of the Council on Ethics at www.etikradet.se

The Fund has developed its risk identification strategy as an important step in its proactive work. The Fund has previ-

ously assessed the risks of potential negative impact caused by the Fund itself or could be present among the Fund's suppliers. To identify risks associated with the Fund's holdings, the Fund is currently working on developing a quantitative model that can identify human rights risks in different sectors, countries and portfolio companies. The model is based on risks to humans rather than risks to the Fund's operations, and special consideration is given to risks that affect already vulnerable groups such as women, children or minorities. The purpose of the model is to help the Fund prioritise its preventive efforts based on the severity of the risks. The outcome of the risk identification has so far resulted in AP2 entering into dialogue with individual suppliers and external managers, and in the Fund asking portfolio companies questions.

read more...

On the Fund's website, www.ap2.se/sv/sustainability-corporate-governance/human-rights/

ments in China as transparency of companies and markets in China is not deemed to be as good as in more well-developed markets. Therefore, the Fund has a close and active collaboration with its external managers in China in order to ensure that sustainability aspects are integrated in investment decisions. In connection with the selection of managers, the Fund investigates how they integrate sustainability in the investment process. Then AP2 carries on an ongoing dialogue with the managers concerning sustainability issues. During the year, the Fund has focused on issues concerning human rights. Follow up of the managers' sustainability work is done quarterly by means of dialogues and written reports from the managers.

Norm-based screening

All companies in AP2's equity portfolios are screened twice a year in order to identify companies that are in breach of international conventions and guidelines. This screening is carried out by an external consultant and forms the basis for dialogues that the Council on Ethics carries on. Read more information about the work of the Council on Ethics at www.etikradet.se

Private equity funds

Since 2014 AP2 is represented on the PRI Private Equity Advisory Committee (PEAC), which is an advisory body for PRI's work with private equity funds. The aim of the committee is to provide views on strategies and activities, to monitor implementation of PRI's Principles for

Responsible Investment within the private equity sector and to assist by providing guidance and a common standard. AP2 has also participated as a member of a working group led by PRI in cooperation with Environmental Resources Management (ERM) in order to produce a guide for ESG evaluation, reporting and dialogue within private equity. The guide which was published in June 2018 is an element of PRI's work to support investors (Limited Partners) and managers (General Partners) to include sustainability in investment processes.

ILPA (Institutional Limited Partners Association) is the only global organisation for investors in private equity funds that focuses on driving issues common to investors in the private equity sector. ILPA has over 450-member organisations and the members' total investments in private equity exceed USD 2 billion. ILPA provides training, establishes best practice, carries on its own research and provides opportunities for investors to exchange experiences.

AP2 has been a member of ILPA for 15 years and holds a seat on the board for the second time. The Fund is also active on ILPA's Public Affairs Committee and previously was active on the Education Committee. The Fund has signed up to ILPA's principles, which can be divided into three main groups: 1) Alignment of Interest, 2) Governance and 3) Transparency. In addition, AP2 has applied best practice that ILPA has developed within a number of areas, above all within reporting and thereby associated information. The Fund also has a number of employees

who have undertaken ILPA's various training courses.

ILPA works continually on updating and developing guidelines for principles, practice and policies, and in 2018 has included frameworks that cover sustainability and diversity. This is included in the questionnaire that AP2 uses in the due diligence process and is an element of the overall assessment in connection with an investment. An increased focus on sustainability issues and a clearer conviction on the significance of sustainability issues for long-term value creation is noticeable among private equity companies. AP2 notices that more private equity companies are working actively on these issues in the investment process and that ESG reporting from private equity companies is also being improved. AP2 is working continually to analyse and evaluate the sustainability work within private equity investments and strives to contribute through dialogue to progress and improvements.



Own model for analysis and evaluation

During 2018, AP2 has developed a model for analysis and evaluation of private equity companies' sustainability work. This model is based on PRI's framework for due diligence and for follow-up and dialogue with private equity companies. Based on a dialogue that includes the due diligence process, ESG reporting and investor meetings, private equity companies' sustainability work is evaluated on 25 assessment points. The evaluation is carried out the first time at the time of investment and is then updated with new information on an ongoing basis. Results show

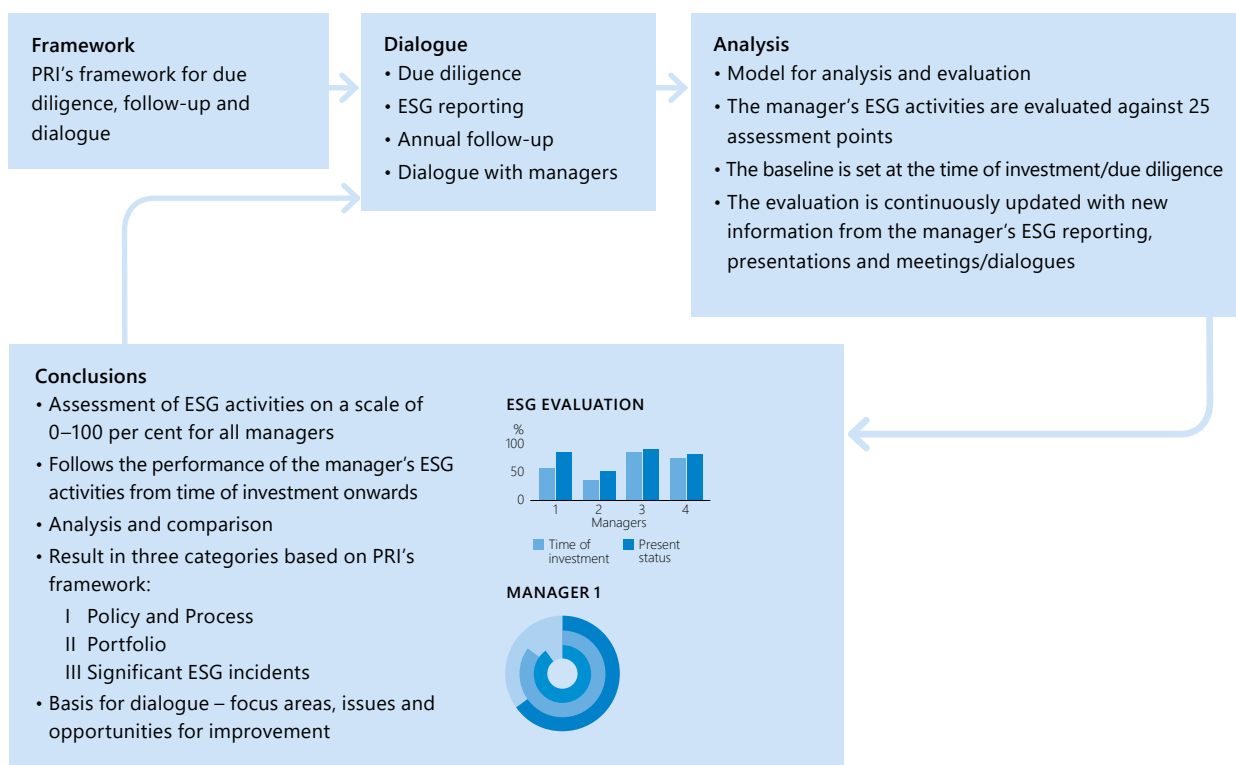
an evaluation and comparison of private equity companies' sustainability work in three categories that follow PRI's framework - policy and process, portfolio and incidents. On the basis of the analysis, AP2 can raise further questions and highlight improvement possibilities in the continued dialogue with the manager.

In addition to systemisation of the evaluation process, evaluation criteria have been established for all assessment points. In addition to an individual evaluation, the aim is to create prerequisites to be able to compare the sustainability work within various management organisations.

Bonds**Green and social bonds**

This year is the tenth year that AP2 has been an investor in green bonds. In 2008, the Fund purchased the world's first green bond from the World Bank. Since then, green bonds have come to be an ever greater part of the Fund's fixed-income portfolio, and green bonds have been a strategic asset class since 2016. One per cent of the strategic portfolio is allocated to green bonds, although the Fund's holdings well exceed this level.

Sustainability issues will be amplified going forward and therewith the interest

WORKING METHODS AND MODEL

for both green bonds as well as social bonds. The interest among issuers and investors continues to grow, above all with a focus on climate and the green bond market. AP2's portfolio is therefore expected to continue to grow at a commercial rate. The aim of green bonds is to finance projects that contribute to necessary transitions and to mitigate the effects of climate change. During the year, the Fund has invested in a number of green bonds from new issuers, which has helped to diversify the Fund's portfolio and expand its climate commitment. The Fund has invested in 55 different issuers with over 1 300 projects across the globe, for example renewable energy, developing public transport and railways, making offices and housing energy efficient and water purification. In connection with AP2's commemoration of the ten-year jubilee for green bonds, a report was released about the Fund's work with green bonds with an overview of climate initiatives and projects across the globe.

Bonds in line with the UN's sustainable goals

One way to expand the sustainability work within fixed-income management has been to invest in social bonds, among other things. AP2 made its first investment in a social bond in 2014. Since then, the Fund has invested in a number of bonds with a focus on social issues. Focus on the UN's sustainable development goals, both in regard to reporting and through dedicated issued bonds. During the year, the Fund invested in, among other things, a bond from the World Bank aimed at equality issues. The purpose of the bond is to increase knowledge on equality issues in

general and to work for the rights of all women and girls and thereby to promote economic growth, reduce poverty and create conditions for a more sustainable society. The bond is in line with the UN's sustainable development goals where equality is one of them.

AP2 active in development

The greater access to green and social bonds is positive as the Fund can promote a more sustainable society in a clear manner at the same time as it generates a good return. Considerable resources are required in order for a transition to a more climate-efficient economy to be able to occur. Furthermore, green and social bonds help to raise awareness of sustainability within the finance industry. AP2 has an active involvement and views it as important to help to develop and raise awareness of the issue. The Fund was represented in the Swedish Government's report "Promoting green bonds" which was presented early 2018. Cooperation with universities and research within the field is self-evident. The Fund has also been represented since 2017 as an advisor for the Yale Initiative on Sustainable Finance (YISF) and the Center for International Climate Research (CICERO).

AP2 had holdings of green and social bonds equivalent to approximately SEK 6.1 billion as per 31 December 2018.

Ongoing work

The Fund takes corporate governance issues into consideration in its active management of corporate bonds. The Fund will develop the integration of sustainability in the management of corporate bonds and is currently working to see

whether additional sustainability factors can be implemented in the investment processes. The Fund has also divested corporate bonds where the issuer is deemed to have financial climate risks.

The Fund has various portfolios with government bonds in growth markets. Work is in progress for one of the portfolios to implement an ESG index, that is to say an index where sustainability factors are integrated. Countries with a poor sustainability ranking will thereby also be allocated a lower weighting in the index.

Traditional real estate

Many different sustainability aspects are important for the real-estate sector. Energy is a key issue as the real-estate sector accounts for almost 30 per cent of the global emissions of greenhouse gases and almost 40 per cent of energy consumption. In spring 2014, the Fund joined the Global Real Estate Sustainability Benchmark (GRESB) in order to better be able to monitor and evaluate the sustainability work for AP2's investments in real-estate. GRESB is an organisation which employs an annual questionnaire survey to assess seven different sustainability aspects in real-estate companies and real-estate funds. These aspects are management, policy and reporting, risks and opportunities, follow-up and environmental management systems, environmental indicators (energy, greenhouse gas emissions, water and refuse) building certification and dialogues with stakeholders. 900 real-estate companies and funds took part in the 2018 survey.

AP2 encourages its unlisted real-estate companies and funds to respond to the GRESB questionnaire every year. All the

Fund's unlisted companies and foreign unlisted real-estate funds responded to the questionnaire in 2018. Of the eleven Swedish listed real-estate companies in which AP2 has invested, four companies responded. This means that AP2 attains the objective that all the Fund's unlisted real-estate companies and funds shall report to GRESB. However, the objective that half of the listed Swedish companies shall report, is not achieved.

GRESB gives each company/fund an overall points score that can vary from 0 to 100. AP2's unlisted companies received an aggregated GRESB score of 86 (74). The unlisted companies' carbon footprint was 2.5 tCO₂e per million SEK invested; in the previous year this was 5 tCO₂e per million SEK invested. See page 46 for the Fund's work on climate and carbon footprint reporting. In November 2018, AP2 organised a sustainability day for the third year in a row for its unlisted real-estate companies in order to develop synergies in sustainability issues among companies and to discuss sustainability indicators. Climate issues were in focus at this event.

Timberland

Timberland is an asset class that offers both diversification and stable, long-term returns. AP2 has been investing in timberland since 2010. Of the Fund's total capital, 1.3 per cent is invested in timberland. The majority of the investments are in Australia and the USA, and in timberland 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 USA and GreenWood Resources in Europe, Latin America and the USA. The Fund's share of timberland investments corresponded to approximately 119 000 hectares as at 30 September 2018.

Requirements for sustainability certification

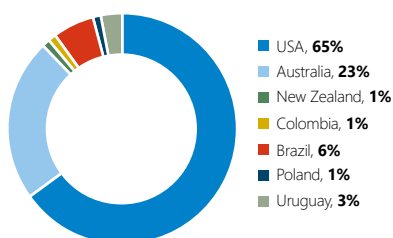
AP2 requires portfolio managers, whenever possible, to certify the timberland assets in accordance with one of the international sustainability certification schemes Forest Stewardship Council (FSC) or Programme for Endorsement of Forest Certification (PEFC). Even if the asset cannot be certified, it will be

managed in accordance with these organisations' certification principles.

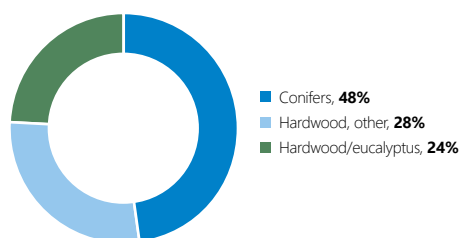
New Forests was started in 2005 and is a fund manager specialising in forestry. It also works to find markets for the ecosystem services the forest offers. Since its start, sustainability issues have been central to New Forests' business concept. New Forests' stated ambition is to be at the forefront of sustainability, which means that it has policies and management systems for its sustainability work and that the timberland assets have been awarded sustainability certification by an independent party. It is also working with various stakeholders on 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 tree species are predominantly eucalyptus and pine. New Forests' sustainability report is available at www.newforests.com.au

Molpus has been managing investments in timberland in the USA since 1996 and has a long tradition of sustainable forestry. The timberland assets in Molpus' funds contain a mixture of deciduous and coniferous trees, primarily oak, maple, poplar, spruce and fir.

GEOGRAPHICAL BREAKDOWN OF FOREST (HECTARES)



PRODUCTION BREAKDOWN OF FOREST (HECTARES)



Molpus also has policies and management systems for its sustainability work. It uses the Sustainable Forest Initiative (SFI), which is the US certification programme within PEFC. Since 2011, it has a multi-site certification, which means that an independent party audits approximately one third of the forests on an annual basis and that new assets are included as they are acquired. Molpus may also, in some cases, choose certification in accordance with FSC. The audit reports are available on SFI's website www.sfi-program.org

GreenWood Resources is responsible for the management of timberland assets in two companies, Global Timber Resources

and Lewis & Clark, which AP2 owns together with other institutional investors. GreenWood was established in 1998 and manages timberland in accordance with FSC and PEFC. It is very involved in developing plant material, focusing on fast-growing tree species such as poplar. Through Global Timber Resources, AP2 is able to diversify both geographically (Brazil, Colombia, Poland and Uruguay) and towards more rapidly growing tree species. Lewis & Clark's timberland assets are traditional forests located on the West Coast of the USA. More information at www.greenwoodresources.com

Farmland

Investments in farmland form part of AP2's efforts to diversify the overall portfolio. Of the Fund's assets under management, 3.0 per cent is invested in farmland. Sustainability issues are central to AP2's investments in farmland. The Fund's strategy is to invest in large-scale farmland assets in countries with clear legal structures. This means that many geographic regions are not available for investment.

AP2 has chosen to invest in farmland through joint ventures with other investors, a form of investment that suits the Fund's long-term view on these investments. The Fund has invested in three jointly-owned

Conservation provision

AP2's timberland also plays a role in the conservation of wild fauna and flora. In the Northwestern USA, in a mountainous area of forest rich in wildlife, some of AP2's timberland has been permanently set aside for the conservation of wild animals, plants and clean water – and for recreation. The area is of great importance for the grizzly bear and many other large mammals, which are dependent on the land bridge that has now been set aside to allow them to roam between the mountains and forests. The easement was prepared in collaboration with Molpus, the Idaho Department of Lands Estate, the Idaho Department of Fish and Game, the Nature Conservancy and the U.S Forest Service, and ensures that sustainable forestry can still take place. At the same time, future division or commercial development of the land is prevented.

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

Carbon storage in forests

Molpus also analyses whether the timberland could be suitable for inclusion in so-called carbon projects. If the expected regrowth volume is significantly higher than felling volumes, the value of the direct forest products is assessed against the value of the forest as a carbon sink (the forest reducing carbon dioxide in a natural way). If the "carbon credits" generated by the forest are to be marketable, functioning regulations and markets are required. The USA has the Climate Action Reserve (CAR), which is a national programme for managing carbon credits. Molpus is actively working to develop projects for its timberland assets in accordance with this programme and takes extensive measurements of the amount of carbon dioxide that is stored in the timberland. Molpus has currently implemented the programme for two of its timberland assets.

The methods used to calculate the amount of stored carbon dioxide are currently being developed. New Forests has produced figures for the volume of carbon dioxide stored in the forests it manages. AP2's share of this carbon storage is around 10.5 million tonnes of CO₂e.

companies and one fund: TIAA-CREF Global Agriculture (TCGA), TCGA II, Teays River Investments and the TIAA European Farmland Fund (TEFF). TCGA and TCGA II own farmland in the USA, Australia, Brazil 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 share of these farmland assets corresponded to an area of approximately 140 000 hectares as at 30 September 2018.

TCGA, TCGA II and TEFF are managed by Nuveen, whose company Westchester is responsible for the operational management of the farmland. AP2 is actively working to improve the companies' sustainability activities, for instance via the Board of Directors. The Fund's representative on the Board of TCGA is also a member of its ESG committee. During 2018, AP2 held discussions with Nuveen on deforestation. In August 2018, Nuveen adopted a policy that makes clear that Nuveen and Westchester have zero tolerance for the acquisition of deforested land. Land cannot be acquired if it has been deforested after the dates stated in the policy (between 2006 and 2017). The various dates are due to the fact that Bra-

zil is divided into different biological zones. More information at www.nuveen.com/institutional/resources

Nuveen is continuously working on increasing transparency, for instance with regard to the geographic location of the farmland. More information at www.nuveen.com/institutional/farmland-map

AP2 does not cultivate any land. The land is either leased to local farmers/companies or managed by the external managers of the jointly-owned companies. Where the farmland is rented out, it is the lessee (the farmer) who decides which crops to grow and is responsible for production and sales 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 out. However, the majority of the investments made by Teays River are managed directly by the operating companies.

Reporting of PRI's Guidance for Responsible Investment in Farmland

In the autumn of 2014, PRI took over responsibility for the administration of the principles of responsible farming that AP2 helped prepare in 2011. Conse-

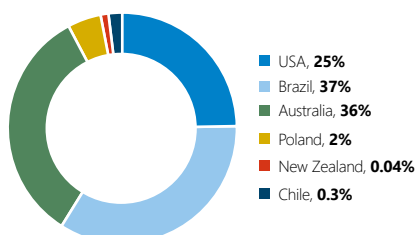
quently, the farmland principles have been developed into "Guidance for Responsible Investment in Farmland".

PRI encourages all signatories who have invested in farmland to implement the guidance. The implementation will not be reported separately, but will be included in PRI's reporting tool. AP2 maintains a continuous dialogue with the managers and also makes visits to farmland assets a couple of times a year. Nuveen publishes a report annually in which it describes its implementation of the guidance for responsible investment in farmland. It has developed a number of indicators on the basis of the guidance which Teays River also uses in its reporting to AP2. More information about how the managers work with the guidance is available on AP2's website.

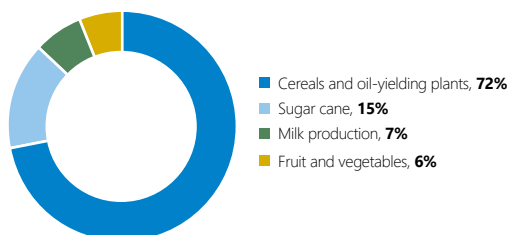
Sustainability audits of farmland in Brazil

TIAA-CREF Global Agriculture (TCGA) leases out farmland in Brazil to Brazilian lessees and operators. In 2015, BSD Consulting, a global sustainability consultant, carried out an audit of all TCGA's farms in Brazil, focusing on the activities' regulatory compliance regarding working conditions, health and safety at work, and the environ-

GEOGRAPHICAL BREAKDOWN OF FARMLAND (HECTARES)



PRODUCTION BREAKDOWN OF FARMLAND (HECTARES)



*“Nuveen is continuously working on **increasing transparency**, for instance with **regard to** the geographical location of the **farmland**”*



ment and integrity. TCGA's ESG committee, of which AP2 is a member, works together with TCGA's manager on the implementation of the audits. The purpose of the audits was to assess compliance with laws and regulations in Brazil, with PRI's Guidance for Responsible Investment in Farmland and/or commitment in relation to sustainability certification.

The audits showed that a majority of TCGA's lessees had good management systems, but non-compliance and/or observations occurred at all farms. In order to support the lessees, TCGA's manager changed its process for site visits to include a more comprehensive review of the lessees' activities as well as a visit to their head offices, which is car-

ried out even if it is not located on land owned by TCGA. The manager has also prepared a detailed code of conduct for the lessees, which is discussed in person with each lessee. A steering and supervisory process to facilitate compliance with the code of conduct is under development. TCGA's manager has also used the results of the audits to improve its control procedures for new acquisitions.

As part of ongoing audit, the manager carried out third party audits of selected farms in TCGA and all the farms in TCGA II in 2018. At the time of writing this report, the results of these audits were not available.

For more information, see AP2's Sustainability Report 2016.

Sustainable investments

AP2 invests just over SEK 18 billion in assets/managers with a business strategy that is primarily based on sustainability. The Fund also has investments worth a total of approximately SEK 20 billion in Vasakronan, Cityhold Office Partnership, US Office Holdings, Castellum, Kungsleden, Fabege and Hufvudstaden, all of which have been awarded Green Star by Global Real Estate Benchmark (GRESB). In total, this accounts for approximately 11 per cent of the Fund's total portfolio. A list of these investments is available on the Fund's website.

Climate

Climate is one of Andra AP-fonden's focus areas, which means that climate issues are integrated into analysis- and decision-making processes for all asset types where it is relevant. The ambition is to develop the portfolio in line with the Paris Agreement.

At the beginning of 2018, AP2 published a climate report according to the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD). During the year, the Fund continued to implement these recommendations and actively worked for more companies and investors to report accordingly. The Fund also works to reduce its direct impact on the climate through its internal environmental work.

The Fund's approach to the climate transition

AP2 is a long-term investor. In the analyses the Fund performs to assess future pension payments, the Fund has a 30–40-year perspective. Therefore, it is natural to work with sustainability issues that have a major impact on social development. The climate is one of those issues. Limiting global warming to two degrees Celsius, or preferably 1.5 degrees Celsius, which the countries of the world agreed at the Climate Conference (COP21) in Paris 2015, means a clear direction towards a society without net greenhouse gas emissions. This shall be achieved sometime after 2050. The special report published by the UN's Intergovernmental Panel on Climate Change (IPCC) in October 2018 shows that it is possible to reach 1.5 degrees Celsius. But this requires that carbon dioxide emissions by 2030 must have decreased by 40 to 60 per cent compared with 2010, if the model does not expect large negative emissions.

AP2's climate ambition is to develop the portfolio in line with the Paris Agreement. The foundation of the Fund's climate work is both to reduce the financial climate risk and contribute to the transition. To describe why and how AP2 works on climate issues, the Fund published its approach to the climate transition in December 2016.

Financial climate risks

Climate change is expected to have a major impact on long-term returns. Integrating climate aspects into risk assessments and investment decisions is therefore becoming increasingly important. Climate risks can be divided into two groups: transition risks and physical risks. Transition risks are divided into regulatory risks, technological risks, market risks and reputation risks. Physical risks are divided into acute and systematic risks.

The Fund has an internal working group on fossil energy and financial climate risks. Since 2013, work has been ongoing on analysing financial climate risks for fossil energy companies and coal-based electric power companies. An important part of this work is to assess whether the climate risks facing the companies are priced by the market. AP2's work on analysing financial climate risks focuses on regulatory risks for companies within fossil energy and the electric power sector. The Fund's work also includes analyses of technologies and markets for fossil energy.

The Fund began by establishing its position on investments in fossil energy and analysing the financial climate risks for

coal and energy companies. This analysis led AP2 to decide in 2014 to no longer invest in a total of 20 energy companies, of which 12 were coal companies.

Approximately 40 per cent of the world's electricity production is based on coal, which is the most polluting energy type, both from a climate and a health perspective. Emissions from coal-based electricity production account for about one-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 power sector, primarily companies that produce, transfer, distribute and/or sell electricity.

In 2018, climate risk analyses were followed up for fossil energy companies, which resulted in further divestments from seven fossil energy companies. Three fossil energy companies have been reintroduced to the Fund's benchmark index, as they no longer meet the criteria that AP2 has for divesting from companies in these sectors. In total, the Fund has divested from equities and corporate bonds in 83 companies due to financial climate risks, including 23 coal, 20 oil and gas companies and 40 utility companies.

Contribute to the transition

AP2 wants to contribute to the transition towards a two-degree society. The Fund will do this by:

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

*“AP2’s climate ambition is to develop the portfolio in line with **the Paris Agreement**”*

In addition, several of the Fund’s employees participate in seminars and conferences to present and discuss the Fund’s work on climate, both in Sweden and internationally. AP2 participates as an advisor in two interdisciplinary research initiatives, CICERO Climate

Finance and the Center for Collective Action Research at the University of Gothenburg.

In September 2018, “The Investor Agenda” was launched, an initiative that investors have developed to drive development to reach the goals of the Paris

Agreement. This initiative calls on investors to show how they integrate climate aspects into their investment processes and in their dialogues with companies and decision-makers, as well as in reporting. AP2 supports this along with about 400 other investors.

Financial contributions of the divestments

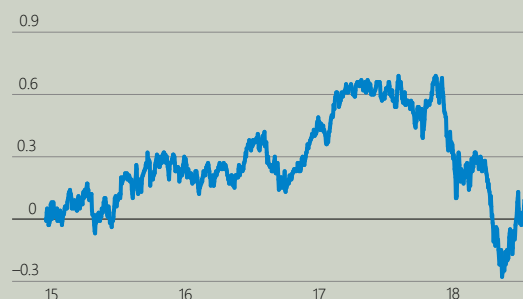
To monitor the financial contributions of the divestments, in 2017 AP2 produced a methodology of comparing returns for MSCI World, excluding and including the divested companies. Of the 83 divested companies, 32 are or have been included in the MSCI World index. The contribution to returns from Autumn 2014 to 31 December 2018 after excluding these companies from the index has been positive at 1.22 per cent. At year-end, the divestments represented 2.1 per cent of MSCI World. A large proportion of the Fund’s divested companies are Chinese

companies and companies in emerging markets, which are not included in MSCI World. During 2018, the Fund developed the methodology for MSCI Emerging Markets. Of the 83 divested companies, 31 are or have been included in the MSCI Emerging Markets index. The contribution to returns from Autumn 2014 to 31 December 2018 after excluding these companies from the index has been positive at 0.11 per cent. At year-end, the divestments represented 1.7 per cent of MSCI Emerging Markets.

**ACCUMULATED CONTRIBUTION
TOWARDS MSCI WORLD, %**



**ACCUMULATED CONTRIBUTION
TOWARDS MSCI EM, %**



*“AP2 actively participates in **Climate Action 100+**, an **international dialogue initiative** launched in December 2017”*



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Investments in sustainable strategies.

Creating a low-carbon society requires, among other things, a conversion of energy and transport systems. Several of the private equity funds that AP2 invests in focus on companies whose products and services enable resource-efficient solutions. AP2's investments in green bonds and timberland are two other examples of investments with sustainable strategies that have a positive climate impact.

Dialogue with companies

AP2 actively participates in Climate Action 100+, an international dialogue initiative launched in December 2017. The investors who are part of the initia-

tive will, over a five-year period, collaborate in dialogues with about one hundred companies that account for the world's largest greenhouse gas emissions. The aim is to make them reduce their emissions so that they are in line with the Paris Agreement, that they report in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) and that the companies' boards take a clear responsibility for the work on the climate. AP2 and Öhmans carry out a dialogue with AB Volvo, which is one of the companies in the initiative. A report showing the development of the dialogues in this initiative was published in December 2018 and is availa-

ble on the Climate Action 100+ website. By January 2019, 310 investors had signed the initiative. More information at www.climateaction100.org

Dialogue with decision-makers

AP2 has been a member of the Institutional Investor Group on Climate Change (IIGCC) for several years. The organisation is working to make investor engagement on the climate issue clear for decision-makers and to submit investors' demands for policy measures, which enable increased investments in climate-smart solutions. Among other things, the IIGCC, together with a number of other investor organisations, has published a document,

Global Investor Statement on Climate Change, which describes how investors can contribute and what expectations investors have on governments. More than 400 investors have signed this document. AP2, along with about 200 global investors, has urged the governments of the G7 and G20 countries to live up to the Paris Agreement, push for rapid implementation and express their continued support for this work.

Carbon footprint

AP2 is positive towards measuring and reporting investments' climate emissions as part of a broader climate work. The carbon footprint provides important information, but there are limits; see the table on page 51.

The listed portfolio's carbon footprint

As early as 2009, AP2 carried out extensive work to analyse its listed portfolio's carbon footprint. By gathering data from all the companies in the portfolio based on the Fund's holdings in each company, the Fund calculated the total carbon dioxide emissions of the holdings. This analysis helped provide the Fund with a more in-depth understanding of the potential costs of carbon dioxide emissions. If companies are forced to pay for their emissions, their profits and cash flows will be affected. The stock market evaluate companies according to how they expect the costs to affect the companies' future profits. It is therefore important for companies to report their carbon dioxide emissions.

For 2018, the Fund reports the carbon footprint of the listed equity portfolio according to the indicators agreed by the AP Funds. In these indicators, the companies' total carbon dioxide emissions are attributed to the equities. The emissions are not broken down between the companies' equities and bonds. The analysis is based on data from MSCI ESG Research. Data on AP2's carbon footprint is available for 97 per cent of share capital, of which 62 per cent is reported and 38 per cent is estimated. This carbon footprint has been calculated for listed equities, which make up approximately 39 per cent of the Fund's total capital.

The absolute carbon footprint for AP2's total equity portfolio in 2018 is 1.7

Cooperation group for carbon footprint reporting

Since 2015, the AP Funds have had a cooperation group with representatives of each AP Fund to coordinate the Funds' reporting of their carbon footprint. In the autumn of 2015, AP2 and the other AP Funds presented a coordinated method for reporting their carbon footprint. The three indicators chosen for the carbon footprint for listed equities were all calculated on the basis of the AP Funds' holdings in the companies. In 2017, all the AP Funds began reporting an additional indicator in response to a recommendation by the TCFD.

The advantage of measuring the carbon footprint is that it provides an overall picture of the carbon dioxide intensity of a portfolio or index. It is then possible to look at sector or company level for more detailed information on the direct

emissions of the sector/companies and the emissions from the electricity they use. For several years now, carbon footprint information has been included in the decision-making basis for index changes at AP2. The carbon footprint can also be used to assess the sensitivity of different portfolios to carbon pricing. A major disadvantage of today's carbon footprint measurements is that it is not possible to identify how much of the change comes from actual reductions in emissions by the portfolio companies. Changes resulting from modifications to the composition of companies in the portfolio affect the portfolio's carbon footprint, but have no effect on carbon dioxide emissions into the atmosphere. Changes in ownership share do not change the company's emissions.

Reporting in accordance with the TCFD

In June 2017, the Task Force on Climate-related Financial Disclosures (TCFD) presented its recommendations for reporting climate-related information. The recommendations are directed at both companies and investors. AP2 supports the recommendations and is working to implement them.

Reporting in accordance with the TCFD's framework includes information on: 1) how the climate issue is handled by the organisation's governing bodies (board of directors and executive management), 2) the organisation's strategy relating to climate change and the transition to a low-carbon society, 3) the organisation's climate risks and opportunities, and 4) the metrics and targets used by the organisation.

In February 2018, AP2 published a report on its climate work in accordance with TCFD's framework. This report will be updated annually every February when the annual report and sustainability report are published and made available on AP2's website.

AP2 was one of the first organisations to report in accordance with this framework. During the year, there has been significant interest in the Fund's TCFD work from both companies and other investors. The Fund has called on investors at conferences and seminars to begin reporting in accordance with the recommendations. AP2 has also contributed its reporting experience to the TCFD's Knowledge Hub.

(2.6) million tCO₂e. If the footprint is related to the Fund's ownership share of the companies' market value, the carbon dioxide intensity is 13 tCO₂e/SEK million, which can be compared to 2017's intensity of 18 tCO₂e/SEK million. If the footprint is instead related to the ownership share of the companies' revenue, the carbon dioxide intensity is 15 tCO₂e/SEK million, which can be compared to 2017's intensity of 28 tCO₂e/SEK million. The reason for the reduction in the footprint is the implementation of new indices for global equities, which take into account the companies' carbon dioxide intensity among other things.

Carbon footprint for other asset classes

AP2's ambition is to be able to eventually present a carbon footprint that includes all asset classes. For 2018, the Fund has calculated the carbon footprint from listed equities, timberland and traditional real-estate. This means that 51 (53) per cent of AP2's Fund capital is measured according to a carbon dioxide indicator.

AP2's unlisted property companies have a carbon dioxide intensity of 2.5 (4) tCO₂e/SEK million based on market value. The reduction in carbon intensity is primarily due to the increase in market valuation. Carbon dioxide intensity per square metre remains unchanged at 0.04 tonnes/m². The energy intensity has fallen slightly from 168 kWh/m² in 2016 to 164 for 2017.

The Fund conducts dialogue with timberland managers on the calculation of carbon storage and carbon dioxide emissions. One of the Fund's managers, New Forests, has calculated the total carbon storage in its forests. AP2's share of this carbon storage is 10.5 (10.4) million tonnes of CO₂e.

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

Internal environmental work

AP2 works in a number of different ways to highlight and minimise the environmental impact of its own activities. It was therefore a natural step to introduce the Fund's own environmental management system, based on the environmental certification issued by the City of Gothenburg. The Fund was first certified in January 2009 and has been recertified annually since then. The system operates on the same basic principle as the ISO 14001 and EMAS systems, but is better adapted to smaller organisations.

The in-house environmental inventory shows that the greatest environmental impact from AP2's office comes from electrical energy use and carbon dioxide emissions associated with travel. Internal targets have been set up based on the Fund's environmental policy. A special environmental

group drives the Fund's own environmental work and all employees undergo regular environmental training.

Since 2015, AP2 has a green lease agreement with the landlord Hufvudstaden. An action plan has been developed to reduce the environmental impact of the premises, including by only using green energy and implementing measures to reduce energy use and improve waste management.

In 2018, AP2's offices was redesigned as variation-based office. Sustainability was one of the factors included in the redesign project, meaning, among other things, that used furniture was purchased where possible. One of the results of the increase in mobile methods of working has been a reduction in the number of printouts. New video conferencing solutions make it more convenient to hold meetings remotely.

BENEFITS AND LIMITATIONS OF THE CARBON FOOTPRINT

Benefits of the carbon footprint

Provides a basis for assessing certain climate-related financial risks such as carbon pricing.

Can form a basis for company interventions such as requirements for emission reduction targets, risk management, business strategies and transparency.

Improves the transparency of the AP Funds and encourages increased transparency and data quality in business and industry.

Limitations of the carbon footprint

Does not measure the total impact of investments on the climate because:

- Only certain emissions are included.
- Emissions data from companies is incomplete.
- Only certain asset classes are measured.
- Savings on emissions through products and services are not calculated.
- Information on fossil reserves is not included.

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 more stringent legislation on energy efficiency. In addition, carbon footprints are not a measure of a portfolio's total climate options or how well a portfolio is positioned for a transition to a low-carbon society.

Does not measure what is required to achieve the two-degree target and provides no guidance on how investors can contribute to achieving it. A unilateral focus on the reduced carbon footprint of individual portfolios therefore risks drawing attention away from actual emission reductions and how investors can provide solutions for a low-carbon economy.

Corporate governance

Shareholders' commitment to and interest in the companies' long-term development is an important prerequisite for better increase in value. As a long-term shareholder, Andra AP-fonden has a very important function in the global capital markets. The Fund is a responsible owner and works actively on issues relating to professional corporate governance, good ethics and environmental considerations as well as developing good practice in fund management issues.

A large proportion of AP2's capital is invested in Swedish and foreign companies, making the Fund a significant shareholder. The Fund is also non-political and independent, both in terms of ownership spheres 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 general meeting is the most important forum for shareholders to exercise their influence. Being able to exercise one's right as a shareholder to vote at the meeting is one of the most important ways of influencing a company. AP2 is therefore active at both Swedish and foreign general meetings. AP2's activities relating to listed companies include active participation at Swedish and foreign general meetings and a dialogue with boards and management teams in the Fund's portfolio companies.

AP2 also promotes good corporate governance by cooperating with other owners on matters of principle and actively contributing to the development of policies, regulations and standards.

Issues in focus

During the year, AP2 continued to focus on remuneration issues and a number of discussions were held with boards concerning the structure of incentive schemes to achieve improvements.

For many years, the Fund has emphasised the importance of having a larger proportion of women on the boards of listed companies, which receives particular consideration when the Fund is involved in nomination work. The Fund also believes that the nomination committees should establish a specific long-term plan for ensuring a good board composition

including factors such as gender, age, background, experience and expertise.

Diversity

During the year, AP2 focused in particular on diversity, and above all on the proportion of women on boards. This was followed up for each of the companies whose general meeting the Fund intended to attend. The Fund, together with AP1 and AP3, also sent a letter to the nomination committees of listed companies on the Stockholm Stock Exchange with no women on their boards or only one woman, if this meant the board was less than 20 per cent female. At general meetings, the Fund votes against proposed boards with no female members.

The Fund's Index of Female Representation for 2018 shows that the proportion of women on boards is now 33.9 per cent. Read more about the Index of Female Representation on the Fund's website.

Individual elections

AP2 has been involved with the issue of individual elections of board members in Swedish companies for a few years. The Fund wants every shareholder's vote to be counted and therefore calls on companies with a high proportion of foreign shareholders to make it possible for those shareholders to elect board members individually. The Fund notes that more companies now word their notices to attend general meetings and reach decisions at the meetings in such a way that members are elected individually.

Incentive scheme

In 2018, the Fund voted against proposed incentive schemes in four Swedish companies because the proposals either contained

matching shares or were otherwise subsidised without specific goal-determined performance requirements. AP2 set out its views on this at these general meetings. The Fund's governance policy states that "AP2 considers that so-called matching shares should be linked to clear targets (performance). AP2 does not consider continued employment and investment on one's own behalf to constitute performance that should in and of itself give entitlement to matching shares. If matching shares are not performance-based, this must be specifically justified". The Fund believes that it is unfortunate when incentive schemes contain matching shares without performance and which are not specifically justified in the documents.

Response to consultation

During the year, AP2 has backed the response from the Institutional Investors' Association (IÄF) to the consultation on the implementation of "Directive on Increased Shareholder Engagement" in Swedish legislation.

IÄF generally takes a positive view on the proposals in the directive. However, IÄF considers some of the proposals to be problematic because they do not favour increased shareholder involvement. This applies to the proposals, or to parts of the proposals, relating to the principles of shareholder involvement, company guidelines for remuneration and remuneration reports, the decision-making process, the regulation of related-party transactions, changes to the 'Leo rules' and the proposal on limited right of initiative. In its response to the consultation, IÄF commented on the areas that are seen as problematic and submitted proposals on how they should be regulated instead. Read the full response to the consultation on the Fund's website.

AP1, AP2, AP3 and AP4 have also submitted their opinions on the EU's three bills on making the financial markets within the Union sustainable. The Funds' opinions related to the bill on taxonomies, investors' obligations and disclosure requirements, and carbon footprints. Read the full response on the Fund's website.

Corporate governance in Swedish companies

Swedish general meetings

The Fund holds shares in around 170 Swedish companies. For practical reasons, the Fund has determined that it is not possible to attend and vote at all the general meetings in the Swedish equity portfolio.

In total, AP2 voted at 89 general meetings in Swedish listed companies in 2018, an increase of 75 per cent compared to the previous year.

For many years, AP2 and other institutional owners have maintained a good, constructive dialogue with the Swedish listed companies, including with regard to many of the issues addressed at the general meetings.

AP2 publishes a separate general meeting report for Swedish companies annually every June, by which time the majority of Swedish general meetings have been held. Read the report in full on the Fund's website.

Attendance at general meetings

The Fund selects the companies whose general meetings it will attend on the basis of a number of criteria:

- Companies that are among the Fund's 20 largest holdings.
- Companies in which the Fund's share of voting rights is at least 1.0 per cent.
- Companies in which the Fund is among the ten largest shareholders.
- Companies with controversial issues on their agendas.

Nomination committees

AP2 is keen to be represented on nomination committees in companies, as this gives it an important opportunity to exercise its influence as an owner. The Fund's policy is to accept any request for nomination committee assignments. The Fund's corporate governance group decides who will represent the Fund based on who is best suited to the assignment.

Because nomination committees are often made up of the three to five largest shareholders in a company, AP2's nomination committee assignments vary depending on the Fund's holdings in the companies. Before the 2018 AGM season, the Fund was represented on the nomination committees of Opus Group and IAR Systems as chair, and in Aca-demia, Coor Service Management, Kindred, Kungsleden, Midsona and Resurs Holding. Before the 2019 AGM season, AP2 is represented on the nomination committees of IAR Systems as chair, and in Better Collective, Coor Service Management, Immunicum, Kindred, Kungsleden, Midsona, Opus Group and Resurs Holding.

Corporate governance in foreign companies

Foreign general meetings

To improve corporate governance in its foreign holdings, the Fund, together with AP1, AP3 and AP4, has had a joint electronic voting platform since 2008, based on the Funds' corporate governance policies. Most issues are dealt with automatically via the voting platform, but some issues, such as remuneration, are sent to the Funds for manual assessment. Each fund makes its own decision on how it will vote.

In foreign markets, the Fund mainly votes in companies in the following eleven countries: Australia, Canada, France, Germany, Italy, Japan, the Netherlands, Switzerland, Spain, the UK and the USA. The main selection criterion for the companies in which the Fund votes is the MSCI global equity index. There are also other criteria, such as a dialogue between the Fund and the company on a particular issue and/or the Fund's submission of a shareholder proposal to the meeting. In 2018, AP2 voted at 816 foreign general meetings. The Fund uses

an external party for the practical voting procedure and votes in writing (proxy voting) using the electronic voting platform.

Each month, the Fund publishes a detailed report of how the Fund has voted in the foreign companies. Read more about how AP2 has voted in various companies on the Fund's website.

Letters to foreign companies

Together with other international investors, the Fund has been engaged in a number of owner dialogues with companies over the course of the year. In order to further improve communication with the Fund's foreign portfolio companies, AP2 writes annual letters to some 50 companies explaining the Fund's view of committed ownership and the importance of exercising voting rights. In these letters, the Fund also explains its reasoning for not supporting 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 initiatives in Sweden and internationally in the areas of the environment, ethics and corporate governance. The Fund also collaborates with other investors to influence new legislation, particularly within corporate governance. These cooperative efforts are becoming more and more important in order to influence and bring about change, thereby improving shareholder value in the long term.

In 2018, AP2, together with a group of other European asset owners, has entered into dialogue primarily with US companies regarding high remuneration. The Fund has also, together with others, met with Japanese and Chinese companies to discuss good corporate governance.

read more...

Read more about AP2's memberships and initiatives on the Fund's website.

Diversity

Variation in age, gender, experience and ethnicity, among other things, provides new perspectives and a good group dynamic. It therefore goes without saying that boards and executive management teams should be multifaceted. Through the Index of Female Representation and work in nomination committees, for example, Andra AP-fonden aims to increase the diversity.

Index of Female Representation

With its annual Index of Female Representation, AP2 aims to spread knowledge, contribute to dialogue and objective debate and, above all, increase the proportion of women on boards and executive management teams. The Fund believes that a broader recruitment basis contributes to diversity, which has a positive influence on boards and executive management. The right conditions and leadership make groups more innovative and creative, which in turn results in prosperous companies.

Since 2003, the Fund has conducted studies together with Nordic Investor Services measuring the number of women at middle management, executive management and board levels in listed companies. Information from the Index of Female Representation is used in the Fund's corporate governance work and is followed up at the annual general meetings that the Fund attends over the course of the year.

The Index of Female Representation for 2018 shows that the proportion of female board members in companies listed on Nasdaq Stockholm is continuing to rise and is now at 33.9 (32.2) per cent. The proportion of women in executive management is also rising, and was at 23.2 (21.7) per cent at the time of measurement in 2018. The proportion of

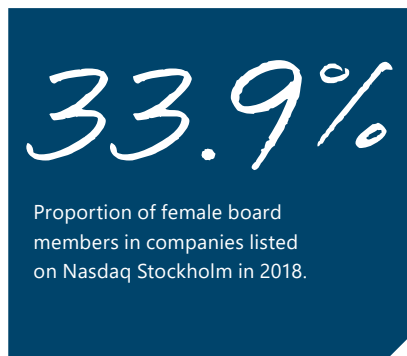
women on boards and in executive management is highest in the 'large cap' companies: 37.7 per cent and 25.8 per cent respectively.

At the rate of change measured over the last five years, it will take 12 years for the proportion of women on the boards to reach 50 per cent, and 24 years for the executive management teams to achieve the same proportion. Read the full report on AP2's website.

Diversity in internally developed indices

In early 2018, AP2's quantitative management moved the global equity capital managed in-house to two internally-developed multi-factor indices, one for developed markets and one for emerging markets. The structure of the indices includes exposure to various ESG factors such as equality and the proportion of women in the company. The new indices are fully in line with AP2's mission since they are expected to provide higher returns at lower risk levels while taking sustainability aspects into account. They are an important part of the Fund's work on integrating sustainability into investment decisions.

An evaluation of the rate of return requires a time period of at least five years, but there are indications that the factor of the proportion of women in the



company from a global perspective has contributed to a positive return in the Fund's multi-factor indices. This has been stronger in developed markets compared to emerging markets. Europe is the region where this factor generates the best returns, both in Eastern Europe (which is included in emerging markets) and in Western Europe. This is consistent with previous observations on historical data.

Read the interview with the managers of the multi-factor indices on page 22. Read more about AP2's in-house work on diversity in the employee section on page 24.

read more...

Read more about diversity in corporate governance on page 52.

Transparency and reporting

It is fundamentally important to a well-functioning financial market that shareholders and other stakeholders are well-informed. Transparency and openness allow investors to form a relevant view of the company's situation and provide them with the basis to make as correct an assessment of its value as possible.

Transparency and reporting is a focus area for AP2. The Fund believes that companies that act transparently towards their stakeholders create trust, clarify risks and opportunities, and provide their stakeholders with insight into the companies' operations.

Supporting initiatives

AP2 supports the recommendations on climate-related information published by the Task Force on Climate-related Financial Disclosures (TCFD) in 2017. The Fund is positive to TCFD's framework, as it increases the companies' transparency and gives investors the information needed to assess the companies' climate risks and opportunities. In early 2018, the Fund issued a climate report in accordance with the TCFD's recommendations, becoming one of the first investors to issue a report in line with the framework. This is an important tool for the Fund's own work, as it provides a framework for describing and communicating the Fund's climate work. The Fund's TCFD report can be viewed on the Fund's website.

For a number of years, the Fund has supported organisations that aim to improve transparency and reporting in various operations. Examples include the EITI (Extractive Industries Transparency Initiative) and the CDP (previously the Carbon Disclosure Project).

Together with the private equity investment sector in a number of countries, the Fund has also produced a

framework that investors can use in their reporting requirements. AP2 has included these issues in its evaluations of private equity funds.

AP2's reporting

AP2 aims to provide clear and comprehensive accounts of its work in its annual reports, sustainability reports and information on its website. Since 2017, AP2's sustainability reporting has been included in the activity report of the annual report.

Information on the AP Funds' dialogues with global companies is described in the annual report of the Council on Ethics of the AP Funds. More information on the Fund's work on implementing the Principles for Responsible Investment (PRI) can be found in the annual survey carried out by the PRI. AP2's response is available on the PRI's and the Fund's websites.

To mark ten years of AP2's activity in the green bond market, the Fund has issued a report presenting an overview of its green bond portfolio. The report is an important tool for highlighting and recognising the sustainability work carried out within the Fund's operations and showing how the Fund invests in order to bring about a transition to more sustainable development. Read the report on the Fund's website.

GRI reporting

The GRI (Global Reporting Initiative) is a framework for reporting and accounting for an organisation's activities in the area

of sustainability with regard to environmental, social and economic aspects. By stipulating requirements for mandatory accounting in compliance with the GRI, the Swedish state ensures a good, steady level of transparent sustainability work in state-owned companies.

The sustainability reporting in this annual report was prepared in accordance with the GRI Standards, Core level. The Fund's GRI index, which can be found on the AP2's website, gives an overview of the general disclosures in accordance with the GRI's guidelines and information for the areas that AP2 has chosen to report on the basis of the materiality analysis. Read more on page 33.

Guidelines for reporting

In accordance with the new legislation for the AP Funds, which entered into force on 1 January 2019, the Funds must jointly produce guidelines on reporting how the objective has been achieved. It is very important to the AP Funds that reporting on their activities and sustainability work is open and transparent. The AP Funds are required to manage their assets and otherwise act in a way that maintains public trust in the Funds and their activities. This means that management must be effective, focused on results and characterised by openness, which also helps maintain a high level of trust in the income-based pension system as a whole. The guidelines are published in full on the Fund's website.

Sustainability data

Climate/Environment

ANDRA AP-FONDEN'S CARBON FOOTPRINT FOR LISTED EQUITIES

	2018	2017	2016	2015
The absolute greenhouse gas emissions of the equity portfolio (Scope 1 and 2) (mn tCO ₂ e) ¹	1.7	2.6	2.7	3.4
Carbon dioxide intensity related to ownership of the companies' market value (tCO ₂ e /SEK m) ²	13	18	20	25
Carbon dioxide intensity related to ownership of the companies' turnover (tCO ₂ e/SEK m) ³	15	28	24	29
Carbon dioxide intensity, weighted average (tCO ₂ e/SEK m) ⁴	16	24		
Market value of the Fund's portfolio covered by CO ₂ e data (SEK bn)	130.5	142.4	135.4	148.5
Proportion of share capital for which data is available (%)	97	92	97	98

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

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

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 in the portfolio (based on market value) multiplied by the companies' carbon dioxide intensity in relation to turnover.

The formulae for the above indicators are available on the Fund's website.

Source: MSCI ESG Research/AP2.

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ENVIRONMENTAL DATA

	2018	2017	2016
Internal environmental indicators			
Electricity, kWh	126 000	135 000	130 000
Renewable electricity, %	100	100	100
Copying paper, purchased (A4), kg	315	350	755
Number of printouts	107 000	159 000	228 000
Business travel			
Proportion of train journeys between Gothenburg and Stockholm, %	88	91	84
Greenhouse gas emissions from:			
Rail domestic, tonnes of CO ₂ e	0	0	0
Air, domestic, tonnes of CO ₂ e	5	5	9
Air, abroad, tonnes of CO ₂ e	169	172	199

Timberland and farmland

CERTIFICATION OF TIMBERLAND

	Number of hectares	Proportion, %
Certified timberland in accordance with the FSC and/or PEFC	108 415	94
Timberland in the process of certification in accordance with the FSC and/or PEFC	4 210	4
Land that is sustainably managed in accordance with the FSC and/or PEFC, but that cannot be certified	837	1
Other: Land taken up by e.g. roads, buildings and other non-productive areas or land that has not yet been planted	1 915	2

The figures in this table are correct as at 31 December 2017.

Corporate governance

NOMINATION COMMITTEES IN WHICH ANDRA AP-FONDEN HAS PARTICIPATED AHEAD OF THE 2018 ANNUAL GENERAL MEETINGS

Company	Proportion of women on the board, %	Number of newly elected women	Total change compared to previous year
Academedia	43	0	0
Coor Service Management	43	0	0
IAR Systems	60	1	1
Kindred	29	2	2
Kungsleden	67	0	-1
Midsona	33	0	-1
Opus Group	43	0	0
Resurs Holding	22	0	0

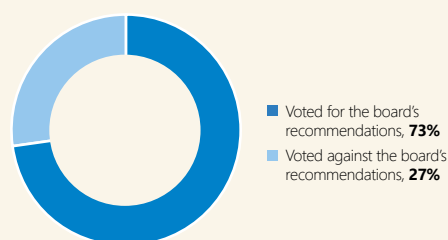
BOARD OR SHAREHOLDER PROPOSALS ON WHICH ANDRA AP-FONDEN VOTED IN 2018 IN FOREIGN COMPANIES, PROPORTION

Area	Board proposal	Shareholder proposal
Auditors, financial reporting, formalities, etc.	1 097	0
Board of Directors	7 394	7
Remuneration issues	943	36
Capital structure	398	8
Group structure, agreements, acquisitions, etc.	108	0
Shareholders' rights/governance	99	193
Sustainability	0	64
Other	0	3
Total	10 039	311

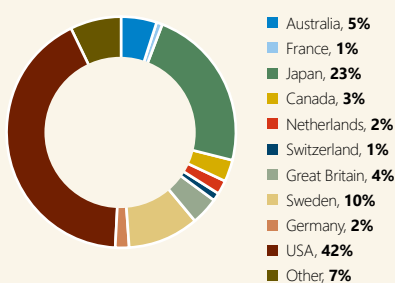
VOTING IN FOREIGN GENERAL MEETINGS IN 2018

	No. of equities
No. of general meetings	816
Agenda items	10 350

VOTING IN FOREIGN COMPANIES IN 2018, %



VOTING PER MARKET IN 2018, %



Employees

STAFF STATISTICS

	2018	2017
No. of permanent staff	70	67
Female staff, %	35	34
Female staff in executive management, %	33	33
Proportion of women on the board, %	44	44
Average age, years	44	43
Median age, years	44	44
Personnel turnover, %	1.5	4.5
Absence due to illness, %	2.1	1.1

*“In the last **five** years, the Fund's annual **average** real **return** has amounted to 5.8 per cent and the last **ten** years the return has been 7.7 per cent”*



Result and performance 2018

As of 31 December 2018, the Fund capital totalled SEK 334.8 billion. The year's result, SEK –4.3 billion, is a consequence of a negative effect from the last quarter's turbulence in the stock markets, but also a good return on the Fund's investments in private equity funds, real estate and Chinese government bonds. During the year, net outflows from Andra AP-fonden to the national pension system totalled SEK 6.8 billion.

Fund capital is affected by two factors, profit/loss for the year and net flows within the pension system. For 2018, Fund capital decreased by a net of SEK –11 103 (21 409) million, affected by the negative result of SEK –4 330 (28 784) million, but also laden with negative net flows to the pension system of SEK –6 773 (–7 375) million. The flows consisted partly of contribution payments and pension disbursements, net SEK –6 557

(–7 149) million, and partly of costs for administration of the pension system, which was charged against Fund capital by SEK –216 (–226) million. For the tenth year in a row, the net flow from the AP Funds to the pension system was negative. Thus, for the past ten years, Andra AP-fonden has, paid out approximately SEK 51 billion to cover the ongoing shortfall in the pension system.

FUND CAPITAL PERFORMANCE 2018, SEK MILLION

	2018	2017
Fund capital at beginning of year	345 931	324 522
Pension contributions received	69 554	66 850
Pension disbursements	–76 111	–73 999
Administration contribution	–216	–226
Net result for the year	–4 330	28 784
Fund capital at year-end	334 828	345 931

DEVELOPMENT OF THE ASSET CLASSES IN THE STRATEGIC PORTFOLIO, EXPOSURE AND RETURN, 31 DECEMBER 2018 AND 31 DECEMBER 2017

Asset class	Strategic portfolio, %		Exposure, %		Exposed value, SEK billion		Absolute return, %		Relative return, %		Active risk ex-post*, %	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Swedish equities	9.5	9.5	8.8	9.1	29.5	31.4	–4.6	11.3	–0.8	0.5	2.3	1.7
Equities, developed markets	21.5	22.0	19.3	22.2	64.5	76.7	–3.3	10.7	0.5	0.7	0.5	0.4
Equities, emerging markets	11.0	11.0	10.4	11.1	34.8	38.4	–7.3	20.6	0.4	–0.5	0.6	0.6
Swedish fixed-income securities	12.0	12.0	11.9	11.8	40.1	41.3	0.8	0.6	–0.2	0.2	0.3	0.3
Foreign government bonds	4.0	4.0	4.0	4.0	13.2	13.8	5.9	–2.3	0.1	–0.1	0.5	0.6
Foreign credits	10.5	10.5	10.3	10.4	34.4	35.8	3.7	–1.7	–0.4	–0.2	0.3	0.2
Global green bonds	1.0	1.0	1.0	1.0	3.4	3.4	4.7	–0.6	0.3	–0.6	0.4	0.4
Fixed-income securities, emerging markets	6.5	6.0	6.3	6.1	21.1	21.1	3.3	3.5	0.7	0.1	0.5	0.4
Total listed assets, excl. alternative investments, commission and operating expenses**	76.0	76.0	72.0	75.7	241.0	261.9	–4.1	9.0	–0.2	0.1	0.4	0.4
Alternative investments**	24.0	24.0	28.0	24.3	93.8	84.0	7.4	9.5				
Total Fund capital, excluding commission and operating expenses**	100.0	100.0	100.0	100.0	334.8	345.9	–1.2	9.1				

* Historical outcome, 12 months rolling.

** Including FX hedging.

Net result for the year

The result for 2018 was negative and amounted to SEK –4.3 billion and primarily reflects a negative development on the world's stock markets, but also good results in unlisted assets. The Fund's investments have a total return of –1.2 per cent (excluding costs).

Operating income

Operating income comprises direct return as well as net result per asset class as well as foreign-exchange gains/losses excluding commission expenses. The breakdown of the result in the income statement means that each net result line shows results cleared of the foreign-exchange effect, as well as conversion of earnings to Swedish kronor, and the effect on results of the Fund's currency hedging. These two effects are reported in net figures in the Net Result line, foreign-exchange gains/losses. Overall, the krona weakening in 2018 has had a significant positive impact on reported earnings in assets in foreign currency. This impact has been partly offset by the negative effect of the Fund's currency hedging of parts of the portfolio.

Direct return, in the form of net interest income and dividends received, totalled SEK 9 467 (9 080) million for the year.

The net result for listed equities comprises both unrealised and realised gains/losses, and totalled SEK –17 029 (22 967) million, including expenses for performance-based fees but excluding foreign-exchange effects. The result is a consequence of a negative return on all equity markets which the Fund invests in. The Fund's Swedish equity portfolio returned a total of –4.6 per cent, compared with a return of –3.3 per cent for the foreign equity portfolio in developed markets and for emerging markets, –7.3 per cent.

The net result for unlisted equities totalled SEK 5 637 (4 283) million, and is primarily attributable to the return on the Fund's portfolio of traditional real estate of 14.7 per cent and the return on private equity funds of 19.9 per cent, including currency hedging.

Net income for fixed-income securities amounted to SEK –2 532 (1 249) million, a result that reflects a continued lower return in 2018 than last year, excluding the effect of the weakening of the krona. The reported return, as a result of the weakening effect of the krona on the portfolio, was slightly positive for all markets.

The Fund's trading in derivatives reported a negative net result, SEK –3 722 (–1 825) million, also this year being primarily affected by the part of the currency hedging's FX futures accounted for as derivative instruments. In addition, a negative impact on earnings from the Fund's ongoing work to maintain the right exposure level is included.

As a consequence of the weakening of the Swedish krona in 2018, the Fund's exposure in foreign exchange (FX) had a positive impact on the reported net result for foreign exchange assets. The Fund's ongoing hedging of parts of the portfolio of foreign exchange assets during the year has had a negative effect on the net result. Reported net result of foreign-exchange gains/losses, where both the year's positive currency effects on foreign holdings, SEK 13 008 (–14 614)

million, and the negative effects of currency hedging, SEK –8 660 (8 143) million, are reported together, amounted to SEK 4 348 (–6 471) million. More details of the Fund's FX exposure on page 76.

Net income for externally managed assets was saddled with management expenses in the form of performance-based fees, totalling SEK 80 (215) million in 2018. 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 236 (241) million, as well as custodial expenses of SEK 44 (40) 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 84. The Fund's operating expenses and commission expenses, expressed as an expense ratio, have fallen and amounted to 0.14 (0.15) per cent for 2018. 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, an effect which remained even during 2017 and 2018. The management cost share for the Fund's total costs for 2018 was therefore at a level which, with the exception of 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. The internalisation has therefore enabled increasing diversification up to the current strategic portfolio. A global cost-efficiency comparison with other pension funds demonstrates that Andra AP-fonden is highly cost-efficient, which is commented on in greater detail on page 77.

Operating expenses

Operating expenses totalled SEK 219 (218) million. Reported as a ratio of average Fund capital over the year, this corresponds to an unchanged cost level (expense ratio excluding commission expenses) of 0.06 (0.06) 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 2018, the approach adopted for Fund capital under external management was mainly active and, by year-end, SEK 58 (58) 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 2018, the fixed cost amounted to SEK 232 (238) million and the variable performance-based element to SEK 80 (215) million. If the management fees for unlisted funds are included, the combined fixed cost for external management of the Fund's assets was SEK 236 (241) million. The year's external fixed management fees have been negatively affected by the weakening of the krona, but nevertheless show a net reduction as a result of the closure of an external mandate. In relation to assets under management, however, commission costs are relatively unchanged compared to the level achieved through the internalisation process in 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. They are 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 44 (40) million in 2018.

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, listed equities and participations (see note 2 on page 84). Brokerage commission paid in 2018 totalled SEK 89 (76) million. Of these costs, 8 (11) 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 0.04 (0.06) per cent of the total trading volume. The following five counterparts (listed in alphabetical order) received commissions corresponding to 60 per cent of total commission payments: Goldman Sachs, JP Morgan, Merrill Lynch, Morgan Stanley and UBS AG.

CONTRIBUTION TO RELATIVE RETURN, %

Asset class	2018	2017
Swedish equities	-0.11	0.10
Equities, developed markets	0.13	0.18
Equities, emerging markets	0.05	-0.07
Swedish fixed-income securities	-0.02	0.04
Foreign government bonds	0.00	-0.01
Foreign credits	-0.05	-0.03
Global green bonds	0.00	-0.01
Fixed-income securities, emerging markets	0.05	0.02
Absolute return	-0.18	-0.06
Total market-listed assets excl. alternative investments and implementation effects	-0.13	0.16
Implementation effects*	-0.05	-0.07
Total market-listed assets excl. alternative investments and incl. implementation effects	-0.18	0.09

* Result effects to maintain exposure to strategic portfolio.

CONTRIBUTION TO ABSOLUTE RETURN, %

Asset class	2018	2017
Swedish equities	-0.4	1.1
Equities, developed markets	-0.6	2.4
Equities, emerging markets	-0.8	2.2
Swedish fixed-income securities	0.1	0.1
Foreign government bonds	0.2	-0.1
Foreign credits	0.4	-0.2
Global green bonds	0.1	0.0
Fixed-income securities, emerging markets	0.2	0.2
Absolute return	-0.2	-0.1
Overlay	-0.1	0.0
Currency hedging listed portfolio	-2.1	1.3
Alternative investments	3.1	1.7
Currency hedging alternative investments	-1.1	0.5
Total assets, excl. commission expenses and operating expenses	-1.2	9.1

Portfolio return

The return on the total portfolio for 2018 was –1.2 per cent, excluding commission expenses and operating expenses but including performance-based fees.

As a result of the turbulent market development during the last quarter of the year, listed equities had a negative development seen from the beginning of the year. Emerging-market equities, which were the best asset class in 2016 and 2017, developed the worst with –7.3 per cent. Foreign equities on developed markets noted a return of –3.3 per cent in Swedish kronor, excluding FX hedging effects. Swedish equities had a return of –4.6 per cent.

Swedish bonds generated a return of 0.8 per cent. Foreign government bonds and credits returned 5.9 per cent and 3.7 per cent respectively, in Swedish kronor and excluding currency hedging. Global green bonds increased by 4.7 per cent, also in Swedish kronor and excluding currency hedging effects. Bonds in emerging markets increased in value by 3.3 per cent in Swedish kronor. The asset type is not currency hedged.

Alternative investments – i.e. real estate, private equity funds, alternative credits, alternative risk premiums, Chinese government bonds and Chinese A-shares – yielded 12.3 per cent (7.4 per cent, including currency hedging). They thus diversified the negative return on the listed portfolio, which was –4.1 per cent including currency hedging.

The contribution made by different asset classes to the total result depends both on the return generated and on the relative percentage of portfolio value they represented during the year. Representing a large share of the portfolio, equities on developed markets contributed –0.6 per cent to the overall result. Swedish equities contributed –0.4 per cent and emerging-market equities –0.8 per cent. The yield contribution of Swedish bonds and foreign government bonds was 0.1 and 0.2 per cent respectively. Global green bonds contributed 0.1 per cent. Foreign credit bonds contributed 0.4 per cent, while emerging-market bonds improved the net result by 0.2 per cent. Alternative investments contributed 3.1 per cent, excluding FX hedging.

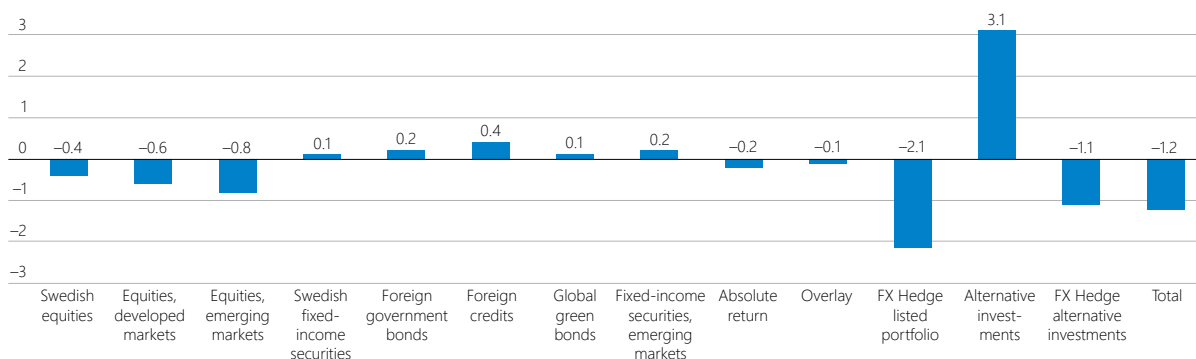
The AP Funds have a statutory limit for currency exposure of 40 per cent. Andra AP-fonden's currency hedging policy aims to reduce the risk in the portfolio. To achieve this, the Fund implements a systematic FX hedging programme of developed countries' currencies, with a view to reducing variation in portfolio worth over the long term. Due to the Swedish krona weakening during the year, the FX hedging effect was –3.2 per cent of the total portfolio. Due to the fact that the Fund does not hedge its entire exposure to the currencies of developed countries, this negative effect on overall return was counteracted by the rise in the value of its foreign exchange assets. The Fund does not hedge emerging-market currencies.

The Fund's real-estate portfolio, excluding timberland and farmland properties, returned 14.7 per cent. The portfolio of timberland and farmland returned 4.1 per cent. The return on private equity investments was 19.9 per cent, while the portfolio of alternative risk premiums generated –1.6 per cent. The alternative credit portfolio returned –1.3 per cent. Numbers are stated including currency hedging.

The Fund invests in equities on the domestic Chinese market, so-called China 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 worst asset class, with an annual return of –20.8 per cent, compared with the previous year's positive return of 36.3 per cent. The negative result for the year was offset by a highly positive active return contribution from the Fund managers. Chinese government bonds, which, like the shares, are classified as alternative investments, returned 10.2 per cent. The asset type is not currency hedged.

Over the past five and ten years respectively, Andra AP-fonden has generated an average return on invested assets of 6.9 and 8.8 per cent per annum. Minus inflation, this is equivalent to an annual real return of 5.8 per cent over five years and 7.7 per cent over ten. The portfolio has thus exceeded Andra AP-fonden's expected real return of 4.5 per cent (including costs) per year over both time periods.

CONTRIBUTION TO TOTAL PORTFOLIO, ABSOLUTE RETURN IN 2018, EXCLUDING COSTS, %



Relative growth for portfolio of listed assets

The Fund's portfolio of market-listed securities comprises Swedish and foreign equities, Swedish and foreign fixed-income securities, tactical allocation and FX management. In 2018, the listed portfolio posted a negative return of -4.1 per cent. Total relative return, i.e. active return including implementation effects (costs arising in connection with rebalancing and transactions that are not attributable to active management) was -0.2 per cent. The relative return is saddled with 5 basis points attributable to implementation effects.

Over the past five years, the Fund's active return has averaged 0.23 per cent per year. Over the same period, implementation effects have averaged -0.05 per cent. Thereby, the average relative return has been 0.18 per cent.

Swedish equities

The management of Swedish equities underperformed the benchmark index by -0.8 per cent. The portfolio of fundamentally managed equities underperformed its weighted index by -1.8 per cent. Small business administration succeeded as in recent years, with an excess return of 3.5 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 0.5 per cent. The active result for emerging-market equities was 0.4 per cent. Chinese A-shares are managed under large-deviation mandates, and the active return for the year was 6.6 per cent. Since these Chinese shares are part of the portfolio's alternative investments, their active return is not included in the Fund's combined active return.

Swedish and foreign fixed-income securities

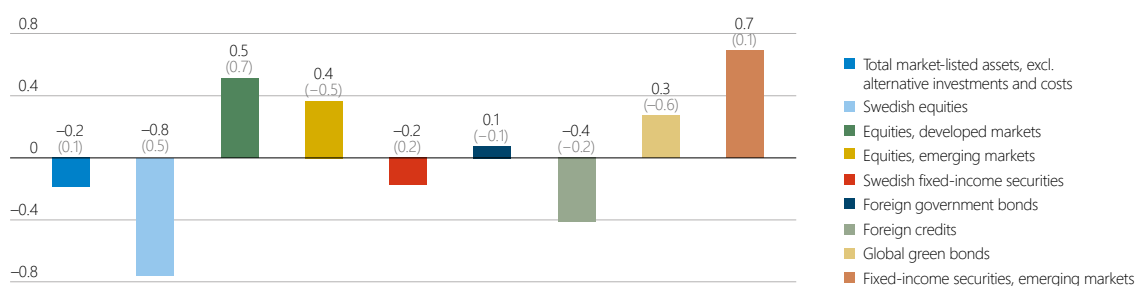
The Swedish fixed-income management's active return was -0.2 per cent, of which the Fund's quantitative management's active return was, if barely, positive for the twelfth consecutive year and amounted to 4 basis points. The portfolio of foreign government securities, managed in-house, outperformed against index by 0.1 per cent. The internally managed credit portfolios' active return was -0.4 per cent.

The management of emerging-market bonds, issued in US dollars, achieved an active return of -0.5 per cent during the year. The management of emerging-market bonds in local currency exceeded the benchmark index by 0.9 per cent.

Tactical allocation and FX management

The Fund's in-house tactical allocation activities delivered a negative result of SEK -516 million. The under-performance of the tactical positions is justified by the assessment of securing the Fund's exposure against the development of the Swedish krona and Swedish interest rates. As the krona weakened and interest rates fell, tactical positions developed negatively, while the corresponding result in the portfolio as a whole was positive. FX management was conducted to a lesser extent this year than before and the net result was 0.

RELATIVE RETURN PER ASSET CLASS 2018 (2017), %

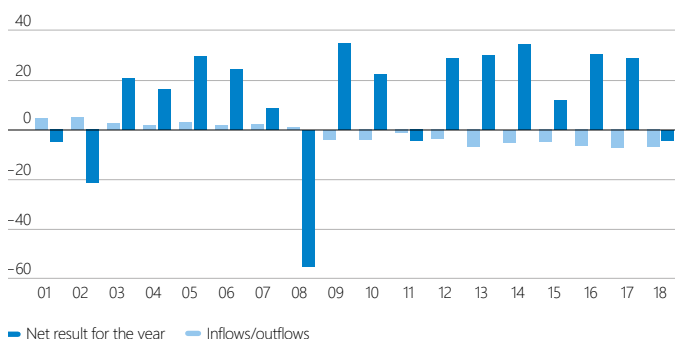


OVERVIEW 10 YEARS

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Fund capital, SEK billion	334.8	345.9	324.5	300.6	293.9	264.7	241.5	216.6	222.5	204.3
Net outflows to national pension system, SEK billion	-6.8	-7.4	-6.6	-4.9	-5.1	-6.9	-3.8	-1.2	-4.0	-3.9
Net result for the year, SEK billion	-4.3	28.8	30.5	11.7	34.3	30.1	28.6	-4.6	22.2	34.9
Return on total portfolio before commission expenses and operating expenses, %	-1.2	9.1	10.5	4.1	13.3	12.8	13.5	-1.9	11.2	20.6
Return on total portfolio incl. operating expenses, %	-1.3	9.0	10.3	4.0	13.1	12.7	13.3	-2.1	11.0	20.3
Relative return on listed assets, excluding alternative investments, commission and operating expenses, % ¹	-0.2	0.1	-0.4	0.9	0.5	0.4	1.1	-0.3	0.8	0.7
Active risk ex-post, %	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.6
FX exposure, %	32	33	31	30	24	23	20	16	12	10
Share of external mandates, %	17	17	17	17	28	25	29	29	23	24
Asset management cost share excluding commission expenses, %	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08
Asset management cost share including commission expenses, %	0.14	0.15	0.15	0.18	0.17	0.17	0.16	0.17	0.17	0.18
Annualised return after operating expenses (5.0 years), %	6.9	9.8	10.6	8.0	9.4	10.8	2.4	0.6	3.5	4.9
Annualised return after operating expenses (10.0 years), %	8.8	6.0	5.5	5.7	7.1	7.0	7.4	4.3	4.2	

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

FUND'S PERFORMANCE AND FLOWS 2001–2018, 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, culminating in 2008. During 2011, the financial markets were sharply affected by debt crises in different parts of the world. Since then, stock exchanges have again shown good development for several years, but the last quarter of 2018 became turbulent. These crises have been mirrored by the Fund's sharply fluctuating accounted results and capital over its first 18 years of operation.

Alternative investments

Within the asset class alternative investments, Andra AP-fonden has gathered its investments in non-listed real estate (including timberland and farmland), private equity funds, alternative risk premiums, alternative credits, investments in Chinese government bonds as well as equity investments in the domestic Chinese stock market.

The return on alternative investments as a whole amounted to 12.3 per cent during the year (including currency hedging earnings, the return was 7.4 per cent).

The unlisted investments (properties including timberland and farmland and private equity funds) that have a total value of SEK 65.8 billion as of 31 December 2018 generated a return of 18.6 per cent (including currency hedging 13.8 per cent).

Listed investments (alternative risk premiums, alternative credits, investments in Chinese government bonds and equity investments in the local Chinese stock market) totaling SEK 27.2 billion as of 31 December 2018 generated a return of -0.8 per cent (including currency hedging results -5.6 per cent).

Alternative investments, with the exception of private equity funds whose holdings are hedged in the same way as the listed portfolio, are hedged at 100 per cent in developed markets while assets in emerging countries are not hedged.

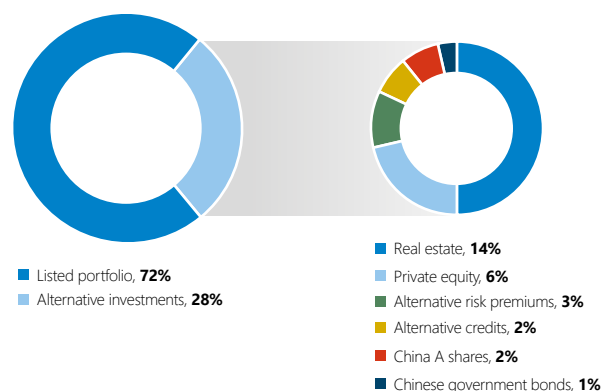
Private equity funds

The private equity portfolio consists of 42 managers and 110 active funds, which provide exposure to over 2 000 companies.

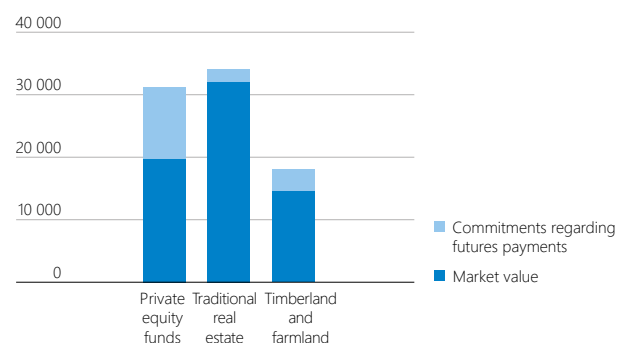
Andra AP-fonden carried out 13 investments during the year. The total commitment for these amounted to the equivalent of SEK 3.9 billion. New investment commitments include allocations to Khosla Ventures, Sequoia, Bain, Towerbrook, Audax, Citic, TCV and Thoma Bravo. For example, Sequoia has established a number of strategies with different focuses in the USA and Asia.

The total investment commitments of the private equity portfolio for 2018 amounted to SEK 37.0 billion. Since the start in 2001, SEK 29.6 billion (including management fees) has been invested of which SEK 27.6 billion has been repaid. During 2018, SEK 4.1 billion has been invested and SEK 5.3 billion has been repaid, resulting in a net inflow of SEK 1.2 billion. In recent years, the portfolio's exposure has been close to the statutory limit of five per cent, mainly due to a strong positive value development

ALTERNATIVE INVESTMENTS' SHARE OF TOTAL PORTFOLIO AND ITS CONSTITUENT ELEMENTS, %



NON-LISTED INVESTMENTS, CLASSIFIED ACCORDING TO MARKET WORTH AND COMMITMENTS REMAINING, SEK MILLION



in the portfolio and strong development of the US dollar. The exposure has been reduced through the sale of seven fund investments corresponding to SEK 1.7 billion. Andra AP-fonden's portfolio was characterised as in previous years by high activity, in which the Funds performed many investments, divestments and stock market introductions.

The exposure to North America was 54 per cent, Europe 25 per cent, Asia 19 per cent and the rest 2 per cent. The portfolio is diversified per sector, where information technology represents 31 per cent followed by infrequently bought commodities and services of 15 per cent and healthcare of 13 per cent. By investment style, buyout and growth funds have the highest share of 56 per cent followed by venture funds at 27 per cent. Exposure to venture increased during the year, mainly driven by positive value development in North America. Exposure to buyout declined, mainly as a result of funds being sold, which also caused exposure to the energy sector to be reduced. The exposure to communications and information technology has been redistributed somewhat due to the changed classification of subsectors in the index.

The return on private equity funds amounted to 23.9 per cent (19.9 per cent including currency hedging) in 2018. The portfolio's market value was SEK 19.5 billion at the end of the year. Since its establishment, the portfolio of private equity investments has continued to generate a better return than the listed 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 page 82–83.

Traditional real estate

The Fund's unlisted real-estate holdings today consists mainly of a 25 per cent stake in Vasakronan Holding AB, 41 per cent stake in US Office Holdings and a 25 per cent stake in Cityhold Office Partnership (via Chaptwo S.à.r.l.). All investments focus on high quality, traditional real estate, centrally located in real-estate

markets with good liquidity. In addition, the portfolio has been supplemented with investments in real-estate funds, four in Asia, one in Latin America and one in Poland. In 2018, Andra AP-fonden decided on a framework for side investments for Gaw Capital. The side investments provide opportunities for increased ownership in investments that are carried out in the Asian markets which are considered to be particularly interesting both from the return and diversification points of view.

By investing in real estate, the Fund creates a solid long-term direct return on investment and risk spread 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 174 properties with a market value of SEK 139 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 Första and Andra AP-fonden's properties in Cityhold Property AB are part of the company. The real-estate portfolio is valued at approximately EUR 2.1 billion and consists of 14 qualitative office properties in good locations in London, Paris, Munich and Hamburg. During this year, a property in Amsterdam was also acquired. Nuveen Real Estate handles the administration of the company, as well as investment and management services.

Andra AP-fonden 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 real estate both directly and via joint ownership. The real-estate portfolio consists of a total of 25 centrally-located office properties. The market value of Andra AP-fonden's share of the properties is approximately USD 1.9 billion. During this year, a property in Chicago was acquired. Around 80 per cent of the portfolio's value consists

of properties on the east and west coast of the USA in New York, Boston, San Francisco, Seattle and Los Angeles, and 15 per cent of the properties are situated in Chicago.

Since 2013, Andra AP-fonden has also decided to invest in six real-estate funds in emerging markets:

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

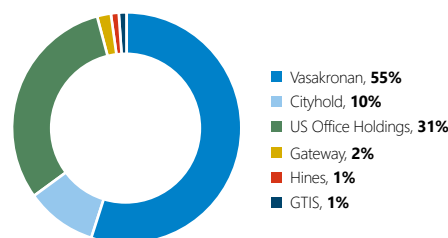
The return on Andra AP-fonden's investments in traditional real estate was 19.2 per cent in 2018 (14.7 per cent including currency hedging). Annualized since the start in 2001, the return has been 14.3 per cent (13.6 per cent including currency hedging).

Timberland and farmland

In 2010, Andra AP-fonden 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 an increased 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.

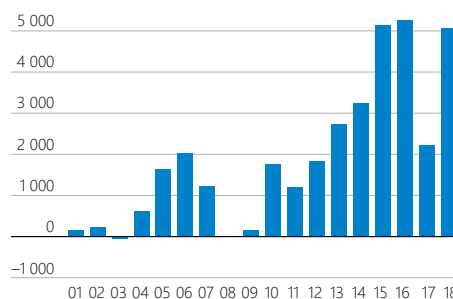
The portfolio for timberland and farmland currently consists of twelve different funds/companies. For Andra AP-fonden, it is important to choose fund managers that subscribe to the same values of long-term, responsible and sustainable investment. The Fund has elected to invest in farmland in the form of joint ventures with other investors, a form that suits Andra AP-fonden's long-term approach to these investments. The farmland properties

INVESTMENT SHARE OF THE TRADITIONAL REAL-ESTATE PORTFOLIO, %

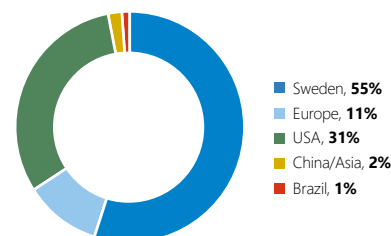


PORTFOLIO GROWTH, REAL-ESTATE

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



GEOGRAPHICAL MARKETS' SHARE OF THE TRADITIONAL REAL-ESTATE PORTFOLIO, %



are mainly located in Australia, Brazil, Poland and the USA, and mainly relate to grain production on large-scale, qualitative farmland properties in countries with clear legal structures, where agricultural production is efficient and the countries are net exporters of agricultural products.

Andra AP-fonden's timberland investments 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, Andra AP-fonden has also invested in a company engaged in timberland investments in Latin America and Europe, where production is geared partly towards biomass.

Funds/companies in which Andra AP-fonden 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 2018, the Fund's return on investments in farmland was 10.2 per cent (4.0 per cent including currency hedging). For timberland, the return was 12.8 per cent (4.6 per cent including currency hedging).

The portfolio is still clearly impacted by negative currency effects, primarily from the long-term weakening of Brazilian real. Timberland and farmland investments in the portfolio show stable and positive revenues in local currencies. The market valuations for the timberland and farmland managed by the Funds and companies in which Andra AP-fonden has invested also show a stable level.

Alternative credits

Andra AP-fonden 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.

Andra AP-fonden's investment mission 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 Andra AP-fonden has had only limited freedom to invest, due to the current legislation affecting non-listed investments. The law's limitation to listed structures has reduced the Fund's investment selection with poorer expected returns and less diversification as a result. However, the opportunities that still remain are 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 to eight

*“By investing in real estate, the Fund creates a solid, **long-term direct return** and risk spread in the total portfolio”*

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, Andra AP-fonden has conducted ongoing investment in corporate credits by utilising external fund managers that apply broad and in-depth credit analyses. The return for 2018 was 7.7 per cent (–1.3 per cent including currency hedging).

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 2018 was 7.3 per cent (–1.6 per cent including currency hedging).

Premiums to reinsure insurance companies make up a significant part of the portfolio of alternative risk premiums. Like 2017, 2018 was a year when several natural disasters occurred. Storms and forest fires in the USA as well as Japanese typhoons affected the return negatively for this part of the portfolio. Despite this, all mandates in the area showed a positive return.

Chinese A-shares

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

An exposure to the structural development of the market is sought and the management is conducted with relatively high deviation from the Chinese benchmark index, MSCI China A gross. The index is considered ineffective and notable for high volatility, which is why a high deviation in relative terms is likely. In 2018, the benchmark index fell by –27.4 per cent in Swedish kronor. All of the Fund's managers continued to show positive relative returns against the benchmark index. The absolute return for Andra AP-fonden's managers was –20.8 per cent for 2018.

Chinese bonds

Since the autumn of 2017, the Fund has had an allocation for Chinese government bonds. At an initial stage, the portfolio is managed passively. However, the ambition is to activate the portfolio in the future.

The investment strategy for Chinese government bonds aims to replicate the return on the benchmark index. This is done by matching the interest rate exposure through quantitative methods for portfolio optimisation. The relative return on Chinese government bonds was in line with the benchmark index, while the absolute return was 10.2 per cent.

Well diversified risk-taking

The Swedish Parliament has formulated clear guiding principles as to how the AP Funds shall interpret their mandate as fund managers. The AP Funds shall adopt 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, independent of one another. The chosen strategy should be neutral with regard to different generations, and a readiness to pay ongoing pensions should be taken into account.

The starting point for Andra AP-fonden's investment strategy and financial risk is that the AP Funds are only able to influence future pensions to the extent that their portfolio management activities impact on the pension system's automatic balancing mechanism. The Board of Directors has therefore concretised the Fund's goal for its asset management activities as minimising the consequences for future pensions of activating the automatic balancing mechanism. It is the primary risk that determines the way in which investment strategy is formulated, rather than the selected portfolio's risk profile. By far the greatest portion of financial risk adopted by Andra AP-fonden in its portfolio management operations derives from its long-term exposure to financially motivated risk premiums, as expressed by the strategic portfolio.

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

The long-term allocation of assets and spread of risk that Andra AP-fonden deems will minimise negative effects on future pensions features a relatively high proportion of higher-risk assets. This means that the value of the portfolio, from one time to another, is expected to show a higher variation than if the allocation of assets had been more defensive. A guiding principle governing the development of Andra AP-fonden's long term investment strategy is to diversify the level of risk in the portfolios where possible, without compromising on the requirement for a high return. In this way, the Fund hopes to minimise the risk of a negative trend in pensions over the long term, while at the same time limiting the portfolio's short-term risk as far as possible.

The long-term orientation the Fund chooses for its portfolio may be characterised in a several ways. One way is to describe it as an allocation of Fund capital between different assets and strategies. Another way is to describe it in terms of anticipated future returns. A third way is in terms of the portfolio's expected risk profile, which plays a key factor in achieving the overall goal – to minimise the risk of lowering the level of future pensions – which is the mission the AP Funds have been tasked with.

Controlling risk

The Fund's level of risk is determined by three parameters. Andra AP-fonden's risk policy, which is determined by the Board of Directors, prescribes the parameters governing the Fund's overall exposure to risk. The CEO's document 'Guidelines for Investment' contains more detailed instructions for the management and monitoring of financial risks. For individual management mandates, parameters defining levels of exposure to risk are specified in an Investment Guideline. The starting point for Andra AP-fonden's risk process is the annual ALM study. It is based on a number of assumptions concerning long-term market growth and risk levels for different asset classes, and is a key tool in formulating the strategic portfolio.

The Fund's risk function

The ongoing risk management consists of three independent but cooperative parts.

Risk budgeting

The Fund's Board of Directors has established the target of a 0.5 per cent relative return, over and above the return of the strategic portfolio. In generating this return, the Board has specified that the active risk (tracking error) in managing the portfolio shall not exceed three per cent. The purpose of the risk budget is to allocate excess return targets and limits for active risk between the Fund's portfolio management teams, to achieve the most effective risk utilisation. In other words, the Fund's information ratio should be maximised. The idea of a risk budget is to dele-

gate targets and resources among the departments mandates. The target and active risk is defined in the Investment Guidelines for each mandate. The risk budget is drafted annually. Senior portfolio managers draft 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, according to current rules and regulations. The main task of the compliance function is to spread awareness throughout the organisation of the regulations that, in the broadest sense, are important to Andra AP-fonden. This can be done in a number of different ways, not least by ensuring that in-house rules, policies and guidelines are established and firmly rooted in the organisation. External regulations include legislation and regulations that apply specifically to the AP Funds, as well as other regulations affecting the capital market, such as those applied to flagging. In-house codes of conduct address areas such as employees' private securities transactions and ensuring that external fund managers observe the terms of their contracts.

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 may be exposed to can be divided into financial and operational risks. The financial risks primarily comprise market risk, credit risk and liquidity risk.

Market risk

Market risk refers to the risk that fair value or future cash flows from a financial instrument will vary due to changes in market rates. In the day-to-day portfolio management process, market risk is measured in absolute terms and relative to the benchmark portfolio. The market risks most relevant to Andra AP-fonden are share price risk, interest risk and exchange rate risk. The Fund

analyses and monitors market risk at fund level, by asset class and per mandate. In this process, the Fund relies on a number of different tools and methods: risk attribution, stress tests and scenario analyses. It also conducts ongoing ad hoc analyses to illuminate the level of risk borne by different parts of the portfolio. Furthermore, the Fund conducts back testing of risk models, as well as the assessment and review of the limit structure.

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.

Ways in which Andra AP-fonden limits credit risk in the fixed-income portfolio include statutory credit checks and exposure limits. The starting point is an agreed interest-rate index for the strategic portfolio. This index is then used to define the parameters determining permitted deviations in terms of credit risk limits as per credit rating. To determine the credit risk, the Fund employs median ratings from rating agencies Standard & Poor's, Moody's and Fitch Ratings. 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. Each new counterparty is subject to a credit check. This is followed by continual evaluation of all current relationships. 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. Counter-

party 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. Andra AP-fonden 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 purchase and sale of equities and bonds with reference to the broker/counterparty. Special attention is paid to possible deviations, which can quickly be corrected. Payment and execution of the transaction is executed simultaneously.

Andra AP-fonden manages concentration risk by analysing distribution, in terms both of geographical region and industry, as well as the distribution between issuers/issuer groups. The most influential factor in managing concentration risk is the choice of benchmark index.

Liquidity risk

Liquidity risk refers to the risk that securities cannot be converted into cash at the appointed time without incurring a substantial loss or considerable cost. 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 Pension Funds Act that requires that no less than 30 per cent of the Fund's assets shall be placed in rights to claim at low credit and liquidity risk,

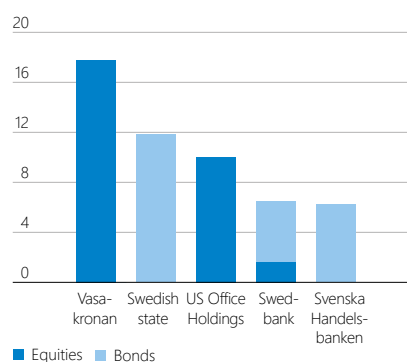
and that a maximum of five per cent of the Fund's total assets may be invested in private equity funds. The liquidity risk on the liability side is very limited, consisting of derivative liabilities.

Operational risk

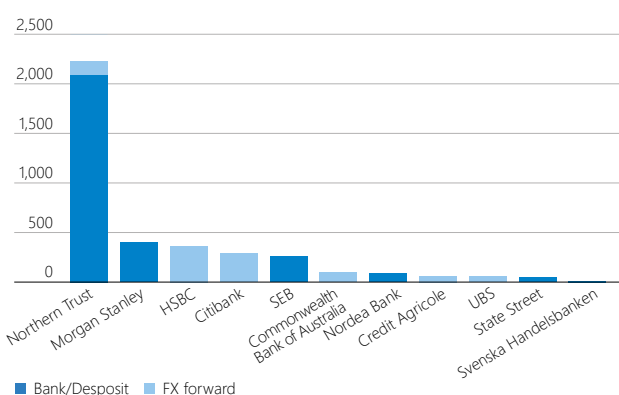
Operational risk refers to the risk of losses arising from inappropriate or unsuccessful in-house processes, human error, incorrect systems or external events. Andra AP-fonden identifies operational risks using a variety of analytical methods and tools – including self-assessment, incident log, process analysis, risk indicators and workshops. The assessment of identified operational risks is then based on determining the likelihood of their happening and the potential consequences. Based on this analysis, the risks are allocated priorities and an action plan is drafted.

An analysis of the Fund's processes 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 Fund's point of departure in process development is to work continually with these processes and monitor any associated risks/checks, as well as ensuring that operations are conducted in compliance with the agreed processes. Process development requires a working approach that is flexible as well as formally defined. The mapping of the Fund's processes was further defined during 2018, now the process map goes beyond the Fund's main activities.

EXPOSURE TO ISSUER, SEK BILLION



COUNTERPARTY RISK, SEK MILLION



Portfolio risk

The ex-post volatility of the listed portfolio, calculated over the twelve months, rose during the year and amounted to 6.0 per cent by year-end.

Andra AP-fonden reports an increased active risk ex-post for the total portfolio in 2018. The active ex-post risk at 31 December 2018 amounted to 0.43 per cent (0.37 per cent). Active risk for the asset class, Swedish equities, increased from 1.7 per cent to 2.3 per cent and other asset classes had only minor changes during the year. Covariance between the relative returns on asset classes in the listed portfolio remained low over the year, indicating a good diversification of active risks in the Fund's portfolio.

The information ratio for the listed portfolio, calculated over 12 months, was negative at year-end. The Sharpe ratio for the Fund's listed portfolio declined during the year, due to a weaker absolute return and was negative (2.5) by year-end.

The duration calculated for the portfolio of fixed-income investments was 5.0 (5.4) years as per 31 December, which corresponds to an approximate decrease of 0.4 years compared with the preceding year. The decrease comes mainly from the asset class Swedish rates. The remaining asset classes noted smaller contributions to the total fixed-income portfolio.

The credit quality of the fixed-income portfolio changed somewhat during the year. The Fund had a share of AAA of 38 (39) per cent, a share of A of 21 (22) per cent and a share of BBB of 21 (20) per cent.

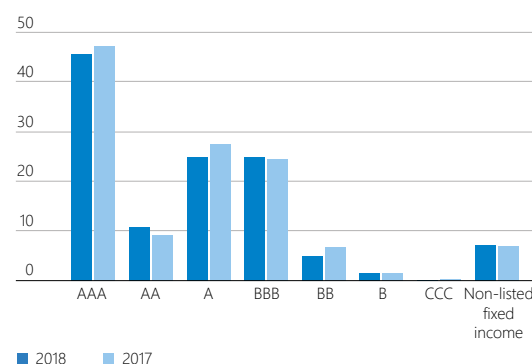
For the currency-hedged asset classes, alternative asset classes are estimated to have the highest absolute ex-ante volatility (see graph page 75, ex-ante volatility and correlation with total portfolio per currency-hedged asset class). Especially Chinese equities have a high estimated absolute volatility. Private equity and traditional real estate are also at high absolute risk. Fixed-income asset classes are expected to have a low absolute risk and the equity risk is expected to be around 10–13 per cent per year. In order to calculate weighted risk contributions, correlation with the Fund's total risk also has to be estimated. Equity asset classes are expected to have a high correlation with the Fund's total risk, fixed-income asset classes are estimated to have very low or negative correlation and alternative asset classes are roughly midway between.

The Fund's total ex-ante volatility is estimated to be 6.2 per cent per year and it is primarily asset classes with equities that contribute the most to risk. This is due to the allocations being large and the correlation to the Fund's total risk is therefore high (see graph page 75, contributions to ex-ante volatility per asset class and change). Although alternative asset classes have high absolute risk, they contribute proportionally with less risk than equities because of a better diversification of the Fund's total risk, but traditional real estate and private equity funds are nevertheless the asset classes that contribute with the most risk besides equities. The risk contributions from all fixed income mandates are very low. The Fund's currency risk is driven by emerging markets.

DURATION 2018, YEAR



CREDIT RISK, SEK BILLION



The estimated volatility increased by approximately 0.3 per cent during the year due to an increased risk contribution from private equity, real estate and timberland and farmland. The equity risk contribution decreased slightly during the year.

The listed portfolio's active ex-ante risk is estimated to be 0.42 per cent (see graph page 75, contributions to listed portfolio ex-ante active risk). Contributions to active risk are dominated by absolute return mandates and Swedish equities. Absolute return is Tactical Allocation (TAA) which caused deviations to the index in currencies and duration. Swedish equities mostly contributed with idiosyncratic risk, which is sometimes referred to as specific risk.

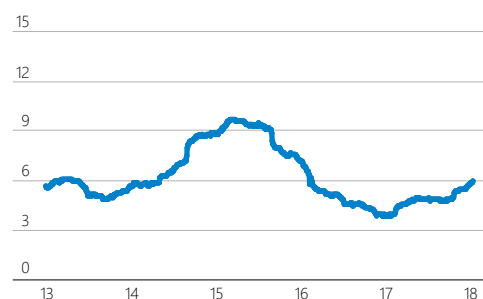
The Fund's one-day 95 per cent VaR (Value at Risk) is estimated to be approximately SEK 2.2 billion (see table below). In other words, the Fund is expected to lose a maximum of SEK 2.2 billion a day per month. The Fund's one-year volatility is estimated to be approximately SEK 20.8 billion. This means that the Fund, with a probability of one standard deviation, estimates that next year's earnings will be between plus or minus SEK 20.8 billion, given that the positions from the beginning of the year do not change.

RISK CALCULATED AS VALUE-AT-RISK (VaR) FOR ANDRA AP-FONDEN'S TOTAL PORTFOLIO, 2018

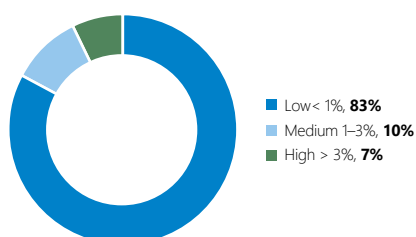
SEK million	Contribution to ex-ante VaR (95%, 1 day)	Contribution to ex-ante volatility (1 year)	Percentage risk, %	Percentage market value (%)
Equity risk	1 261	12 143	59	39
Interest rate risk	51	493	2	33
Currency risk	204	1 963	9	–
Alternative investments	640	6 164	30	28
Total Andra AP-fonden	2 156	20 763	100	100

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

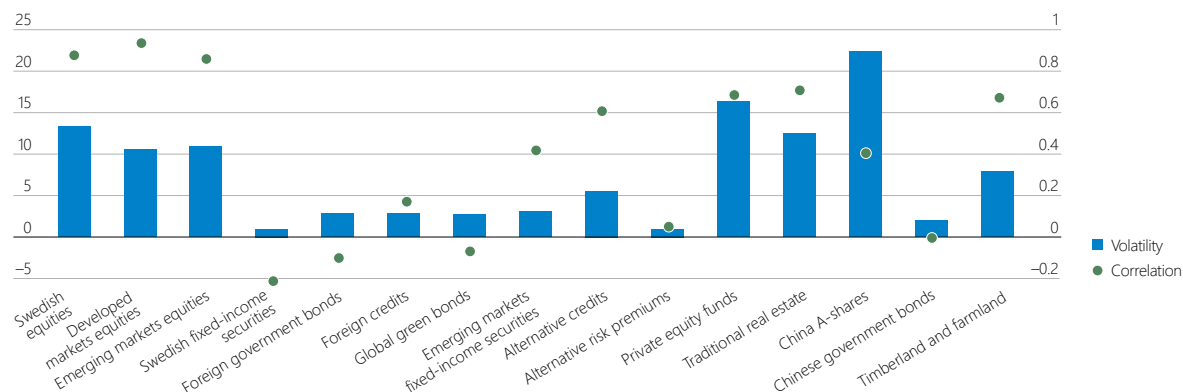
VOLATILITY IN THE LISTED PORTFOLIO THE LAST FIVE YEARS, %



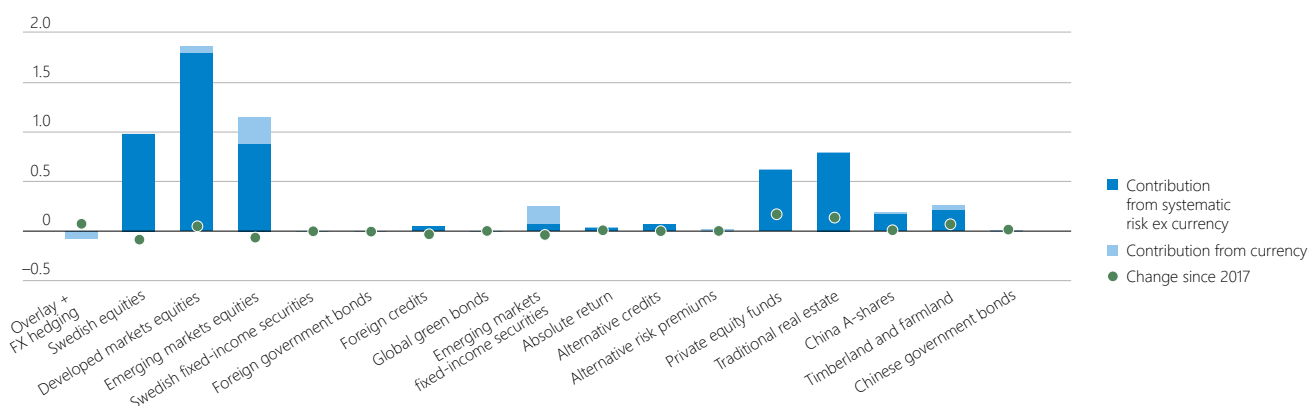
ALLOCATION OF ACTIVE RISK, %



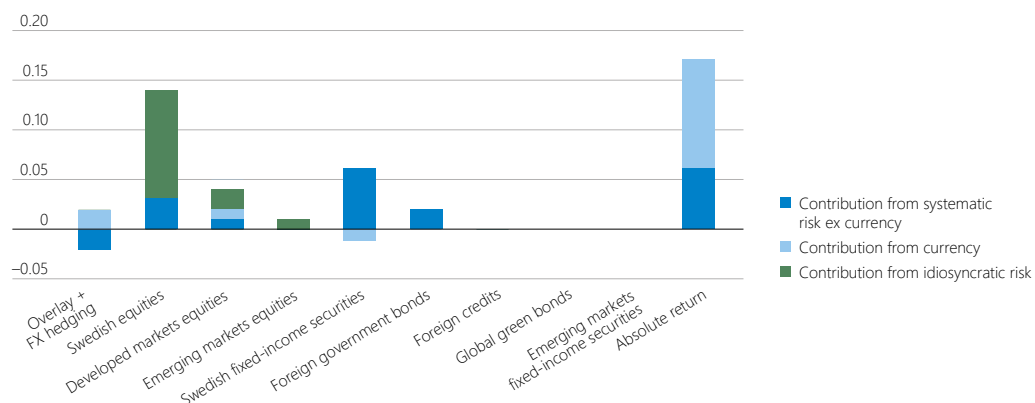
EX-ANTE VOLATILITY AND CORRELATION WITH TOTAL PORTFOLIO PER CURRENCY-HEDGED ASSET CLASS



CONTRIBUTIONS TO EX-ANTE VOLATILITY PER ASSET CLASS AND CHANGE, %



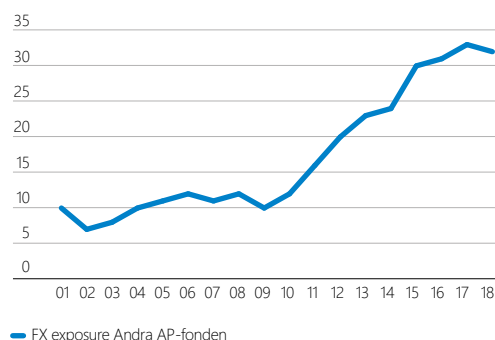
CONTRIBUTIONS TO LISTED PORTFOLIO EX-ANTE ACTIVE RISK, %



FX exposure

The degree of exposure in foreign exchange (FX) is a risk factor that can have an impact on the worth of all asset classes traded in currencies other than the Swedish krona. By the end of the year, 32 (33) per cent of the Fund's portfolio was exposed in foreign currency. The largest part was the Fund's exposure to USD, CNY and HKD. The Fund's hedging policy is determined by the Board of Directors and is part of the 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 2018 has meant a positive net impact on the result, reflecting the net weakening of the Swedish krona against other currencies. The hedging programme has had a negative impact on the net result. The Fund reported an overall positive result on FX transactions for its total portfolio, including FX hedging amounting to SEK 4.3 (–6.5) billion.

FX EXPOSURE, GROWTH SINCE START, %



Statutory limit for FX exposure is 40 per cent.

FX EXPOSURE 2018 AND 2017, EQUIVALENTS IN SEK MILLION

31 December 2018	USD	CNY	HKD	IDR	EUR	INR	Other	Total
Equities and participations	79 330	6 358	7 248	734	17 136	2 354	39 402	152 562
Bonds and other fixed-income securities	43 317	3 762	–	2 003	19 408	–	20 734	89 224
Other assets and liabilities, net	600	518	191	2 697	649	1 735	–3 076	3 314
Derivative excl. FX derivatives	4	–	–	–	–	–	–	4
FX derivatives	–84 600	–	–341	542	–32 540	468	–22 855	–139 326
FX exposure, net	38 651	10 638	7 098	5 976	4 653	4 557	34 205	105 778

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 fixed-income 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
Derivative 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

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.

Investing in IT

In 2017, Andra AP-fonden began a long-term investment in IT. This initiative means that IT will be a focus area up to and including 2020. The ambition is to develop and implement an IT strategy that is adapted to Andra AP-fonden's management strategy and approach for the coming decade. This strategy includes determining the future platform on which the model-based management is to be conducted, and implementing a solution that allows a high degree of mobility both within and outside the office. During 2018, VDI was implemented for most of the Fund's employees.

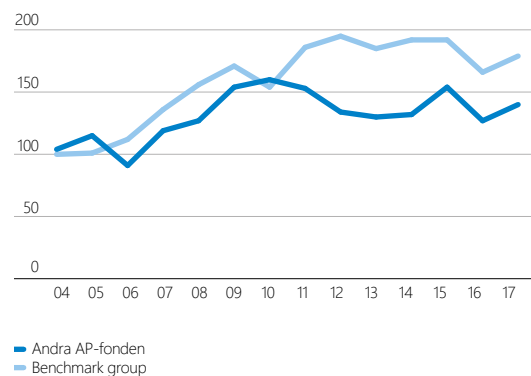
VDI is an abbreviation of Virtual Desktop Infrastructure and involves virtualising the work computers to a centralised location. The employees can then use cost-effective thin clients that work directly from a central server cluster. One of the benefits of this virtualisation is that individual groups/employees can quickly get their computer capacity adjusted. Another advantage is increased mobility, since VDI can also be used for remote working. Since VDI requires significantly less maintenance and support per employee, IT-related costs will decrease.

In 2019, recruitment will take place in order to strengthen competence in system development. This, together with an already established competence in business development, will enable solutions that increase efficiency while at the same time reducing operational risks through a higher degree of automation.

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 an impact on the overall cost of managing 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. Andra AP-fonden has partici-

COST-EFFICIENCY COMPARISON WITH INTERNATIONAL PENSION FUNDS 2004–2017, INDEXING



The CEM study shows Andra AP-fonden's cost development in relation to its benchmark group, 2004–2017.

Source: CEM

pated in CEM's annual benchmark study since 2004 and, according to the latest analysis, which covers 2017, Andra AP-fonden's portfolio management continues to be successful and cost-efficient. The Fund's cost level is with a good margin still lower than the benchmark group, which is mainly due 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 a well-developed methodology and great expertise. Andra AP-fonden 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 index, known as 'transitions', and the ongoing rebalancing of the strategic portfolio, are referred to as implementation effects. In 2018, these implementation effects totalled -0.05 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 2018, these costs relating to VAT on services charged from outside Sweden amounted to SEK 33 (31) million.

Cost-efficiency through collaboration with other AP Funds

Through four independent buffer funds, with the same assignment, a well-functioning and healthy competitiveness has occurred and has led to cost-effective management. It has also led to the total fund assets being spread and not becoming too concentrated. In areas that do not jeopardise the independence of the Funds, the AP Funds work together to achieve cost savings, synergies and efficient resource utilisation. It is also important to ensure 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 even more increased focus on cooperation between the Funds. The collaboration is already taking place in various established forums in the form of nine coordination groups with varying compositions of representatives from the AP Funds. 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. During the past year, a new coordination group focusing on system management has also been established.

*“The Fund’s **cost level** is with a good margin still **lower** than **the benchmark group**”*



Income statement

Amounts in SEK million	Note	Jan-Dec 2018	Jan-Dec 2017
Operating income			
Net interest income	1	3 536	3 182
Dividends received		5 931	5 898
Net result, listed equities and participations	2	-17 029	22 967
Net result, non-listed equities and participations	3	5 637	4 283
Net result, fixed-income securities		-2 532	1 249
Net result, derivative instruments		-3 722	-1 825
Net result, foreign exchange gains/losses		4 348	-6 471
Commission expenses, net	4	-280	-281
Total operating income		-4 111	29 002
Operating expenses			
Personnel expenses	5	-127	-134
Other administrative expenses	6	-92	-84
Total operating expenses		-219	-218
NET RESULT FOR THE YEAR		-4 330	28 784

Balance sheet

Amounts in SEK million	Note	31 December 2018	31 December 2017
ASSETS			
Equities and participation			
Listed	7	135 984	155 585
Non-listed	8	65 000	55 483
Bonds and other fixed-income securities	9	127 416	129 978
Derivative instruments	10	2 891	2 647
Cash and bank balances		3 070	2 810
Other assets	11	373	267
Prepaid expenses and accrued income	12	1 764	1 763
TOTAL ASSETS		336 498	348 533
FUND CAPITAL AND LIABILITIES			
Liabilities			
Derivative instruments	10	599	1 490
Other liabilities	13	341	511
Deferred income and accrued expenses	14	730	601
Total liabilities		1 670	2 602
Fund capital	15		
Fund capital at beginning of year		345 931	324 522
Net payments to the national pension system		–6 773	–7 375
Net result for the year		–4 330	28 784
Total fund capital		334 828	345 931
TOTAL FUND CAPITAL AND LIABILITIES		336 498	348 533
Pledged assets and contingent liabilities	16		
Other pledged assets and contingent liabilities		2 421	4 904
Commitments		25 831	25 785

Accounting and valuation principles

The annual report shall be prepared in accordance with the "Swedish National Pension Funds Act (2000:192)" 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 Funds 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. Andra AP-fonden 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 analyses have 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, both equities in and loans to 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. Loans to subsidiaries and associated companies that are intended to be held to maturity are valued at fair value through the Fair value option in IFRS 9. However, the entire change in value is reported as part of the shareholding on the line Net result, non-listed equities and participations.

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 profit/loss per asset class are included under Net result. Equity instruments are held for trading and are therefore valued at fair value in the income statement. Debt instruments are held for trading and are therefore valued at fair value in the income statement. Loans to subsidiaries and associated companies are intended to be held to maturity, but here the fair value option is utilised in order for the law on public pension funds requirements for fair value measurement to be fulfilled. In cases where reference is made below to the selected index provider, see page 19 for information on the current index. The AP funds follow all their assets based on fair value. 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 sub-

ject 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 securities

For bonds and other fixed-income securities, 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 securities, 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.

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 sold security 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 Andra AP-fonden 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 in a separate note, under 'Pledged assets and contingent liabilities'. 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 portfolio managers, as well as fixed fees for listed funds. The performance-based fee, which is paid out if the portfolio 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 portfolio 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

Andra AP-fonden 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, Andra AP-fonden 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

Amounts in SEK million	Jan-Dec 2018	Jan-Dec 2017
Interest income		
Bonds and other fixed-income securities	3 511	3 097
Other interest income	55	116
Total interest income	3 566	3 213
Interest expenses		
Other interest expenses	-30	-31
Total interest expenses	-30	-31
Net interest income	3 536	3 182

Due to the introduction of IFRS 9 on 1 January 2018 and changes in IAS 1, the derivative instruments' interest components are no longer reported on the line Net interest, but instead on the line Net result, derivative instruments. In order to facilitate comparison with the previous year, the comparative figures have been adjusted accordingly and therefore differ from what was reported in the previous year's annual report.

2 Net result, listed equities and participations

Amounts in SEK million	Jan-Dec 2018	Jan-Dec 2017
Net result, listed equities and participations	-16 940	23 043
less brokerage commission	-89	-76
Net results, listed equities and participations	-17 029	22 967

3 Net result, non-listed equities and participations

Amounts in SEK million	Jan-Dec 2018	Jan-Dec 2017
Capital gains, net	1 882	2 097
Unrealised changes in value	3 755	2 186
Net result, non-listed equities and participations	5 637	4 283

Reporting of external portfolio management fees for non-listed equities 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 260 (264) million has been paid in management fees for non-listed assets, of which SEK 256 (261) million pertains to repayment according to the principle above. During the year, SEK 320 (209) million was also repaid and the unrealised result for non-listed equities and participations has had a net effect of SEK 64 (-52) million. Paid management fees where the contract does not allow repayment amounted to SEK 4 (3) million and are reported as commission expenses, see note 4, Commission expenses, net below.

4 Commission expenses, net

Amounts in SEK million	Jan-Dec 2018	Jan-Dec 2017
External asset management fees, listed assets	232	238
External asset management fees, non-listed assets	4	3
Other commission expenses including custodial expenses	44	40
Total commission expenses	280	281

Commission expenses do not include performance-based expenses. During the year performance-based expenses amounted to SEK 80 (215) million and reduced the net gain for respective asset classes.

Note 4 contd.

EXTERNAL MANAGEMENT MANDATES AS PER 31 DECEMBER 2018, SEK MILLION

Mandate	Average assets under management 2018	Market value 31 December 2018*	% of Fund capital	External management expense
External discretionary mandates				
Equity mandates				
Active management				
MFS Global equities	6 057	4 713		
APS Chinese A-shares	2 868	2 295		
Cephei Chinese A-shares	2 670	2 147		
UBS Chinese A-shares	2 677	2 196		
Total external discretionary mandates	14 272	11 351	3	87
Investments in listed external funds				
Equity funds	11 174	9 220		
Fixed-income funds	13 564	13 407		
Total investments in listed external funds	24 738	22 627	7	145
Investments in non-listed private equity funds and real-estate funds				
	22 753	24 076	7	4
TOTAL CAPITAL ASSETS UNDER EXTERNAL MANAGEMENT AND MANAGEMENT EXPENSES	61 763	58 054	17	236

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

5**Personnel expenses**

Number of employees	2018			2017		
	Total	Men	Women	Total	Men	Women
Average number of employees	65	42	23	66	43	23
Number of employees, 31 December	70	45	25	67	44	23
Number of persons in Executive Management Group, 31 December	6	4	2	6	4	2

Personnel costs in SEK thousands, 2018	Salaries and remuneration	Variable remuneration	Pension costs	Of which salary swap	Social costs incl. special employer's contribution	Total
Chair of the Board	115	–	–	–	37	152
CEO	3 899	–	1 490	254	1 605	6 994
Board of Directors, excluding Chair	504	–	–	–	146	650
Executive Management Group excl. CEO						
Chief Investment Officer (CIO)	2 797	–	1 029	444	1 136	4 962
Head of Business Support	1 750	–	859	–	759	3 368
General Counsel	2 291	–	687	102	932	3 910
Head of Communication & HR	1 918	–	689	127	789	3 396
Head of Performance & Risk Management	1 796	–	646	51	721	3 163
Other employees	53 158	–	22 158	–	21 647	96 963
Total	68 228	–	27 558	–	27 772	123 558
Other personnel expenses						3 642
Total personnel expenses						127 200

Personnel costs in SEK thousands, 2017	Salaries and remuneration	Variable remuneration	Pension costs	Of which salary swap	Social costs incl. special employer's contribution	Total
Chair of the Board	115	–	–	–	37	152
CEO	3 739	–	1 454	254	1 546	6 739
Board of Directors, excluding Chair	506	–	–	–	132	638
Executive Management Group excl. CEO						
Chief Investment Officer (CIO)	2 912	–	984	381	1 175	5 071
Head of Business Support	1 685	–	774	–	717	3 176
General Counsel	2 254	–	675	102	920	3 849
Head of Communication & HR	1 771	–	679	127	608	3 058
Head of Performance & Risk Management	1 720	–	595	44	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 expenses						3 858
Total personnel expenses						134 138

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 directors. 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 106.

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 8 (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 24 (66) thousand; Head of Business Support, SEK 1 (0) thousand; General Counsel, SEK 1 (1) thousand; Head of Communication & HR, SEK 0 (0) thousand and Head of Performance and Risk Management, SEK 3 (1) thousand. 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. A senior executive of Andra AP-fonden, appointed before these Government guidelines came into force, is entitled to twelve months' notice without severance pay. These terms have not been renegotiated, as this 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. Andra AP-fonden's incentive programme comprises all staff apart from the CEO and other members of the Executive Management and compliance functions. 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 described 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, Andra AP-fonden 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. Andra AP-fonden has used this statistical data to compare remuneration levels for all its employees. In 2018, 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 lim-

its 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. More information is available on the Fund's website.

Other

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

6 Other administrative expenses

Amounts in SEK million	Jan-Dec 2018	Jan-Dec 2017
Rental expenses	6	6
Information and IT expenses	61	58
Purchase services	12	10
Other expenses	13	10
Total other administrative expenses	92	84
Fees to auditors		
Audit assignments		
PwC	0.78	0.92
Accounting activities in addition to audit assignments		
PwC	0.03	–
Total remuneration to PwC	0.81	0.92

7 Equities and participations, listed

Amounts in SEK million	31 December 2018	31 December 2017
Swedish equities	30 693	32 600
Foreign equities	96 071	111 988
Participations in foreign funds*	9 220	10 997
Total listed equities and participations	135 984	155 585
* of which participations in mixed funds	–	–

Like others engaged in long-term asset management, Andra AP-fonden 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 2018, total income from pledged securities amounted to SEK 15 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 98–100.

A complete list of Swedish and foreign holdings may be found on the Fund's website.

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Equities and participations, non-listed

Amounts in SEK million	31 December 2018	31 December 2017
Swedish equities in associated companies	17 704	15 218
Foreign equities in subsidiaries and associated companies	21 749	18 687
Other non-listed Swedish equities and participations	0	0
Other non-listed foreign equities and participations	25 547	21 578
Total non-listed equities and participations	65 000	55 483

When calculating the share of private equity funds in relation to the statutory five per cent limit, this amounted to 5.5 per cent on 31 December 2018. 11 private equity funds contain more than 50 per cent listed securities and are thus not defined in the case of limit follow-up as non-listed assets.

Amounts in SEK million	Corp. Reg.	Registered office	No. of equities	Holding, %	31 December 2018 Fair value	31 December 2017 Fair value	Own capital	Result
Swedish equities in associated companies								
Vasakronan Holding AB	556650-4196	Stockholm	1 000 000	25	17 704	15 218	60 271*	12 902*
Foreign equities in subsidiaries and associated companies								
Chaptwo S.à.r.l.		Luxemburg		100	2 051	1 918		
Lewis & Clark Timberlands LLC		USA		24	1 318	1 052		
Molpus Nordic Woodlands L.P.		USA		99	618	590		
TIAA-CREF Global Agriculture LLC		USA		23	3 105	3 552		
TIAA-CREF Global Agriculture II LLC		USA		25	4 860	2 955		
U.S. Office Holdings L.P.		USA		41	4 817	4 516		
U.S. Core Office APTWO L.P. **		USA		99	4 435	3 700		
U.S. Office APTWO JV II L.P.***		USA		99	545	404		
Total foreign equities in subsidiaries and associated companies					21 749	18 687		

* Refers to figures published as per 31 December 2018.

** 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.

Amounts in SEK million	Registered office	Holding, %	31 December 2018 Acquisition value	31 December 2017 Acquisition value
Other non-listed Swedish equities and participations				
Swedstart Tech KB	Stockholm	3	3	3
Five largest shareholdings in other non-listed foreign equities and participations				
Pathway Private Equity Fund IXC	USA	99	842	951
Pathway Private Equity Fund IXB	USA	99	745	789
Teays River Investments LLC	USA	7	665	665
TIAA European Farmland Fund	Cayman Islands	20	592	548
CVC European Equity Partners VI	Jersey	1	542	578

A complete list of Swedish and foreign non-listed holdings is available on the Fund's website.

Amounts in SEK million	31 December 2018	31 December 2017
	Fair value	Fair value
Breakdown by issuer category		
Swedish State	7 379	7 746
Swedish municipalities	429	226
Swedish mortgage institutions	16 757	18 461
Other Swedish issuers		
Financial companies	11 696	12 089
Non-financial companies	1 217	1 259
Foreign states	29 886	30 430
Other foreign issuers	59 964	59 218
Deposits	88	549
Total	127 416	129 978
Breakdown by instrument type		
Other bonds	112 897	115 732
Non-listed loans	1 024	1 066
Participations in foreign fixed-income funds	13 407	12 631
Deposits	88	549
Total	127 416	129 978

10 Derivative instruments

Amounts in SEK million	31 December 2018		31 December 2017	
	Fair value Positive	Fair value Negative	Fair value Positive	Fair value Negative
Equities-linked instruments				
Forward contracts	4	–	–	0
Total	4	–	–	0
of which cleared	4	–	–	0
Index-linked instruments				
FRA/Futures	–	1	0	9
Swaps	–	75	–	37
Total	–	76	0	46
of which cleared	–	–	–	–
Currency-linked instruments				
Options, held	4	–	61	13
Options, pledged	–	4	–	25
Forward contracts	2 883	519	2 586	1 406
Total	2 887	523	2 647	1 444
of which cleared	–	–	–	–
Total derivate instruments	2 891	599	2 647	1 490

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Derivative positions with a negative value of SEK 75 million have a longer duration than 12 months. The 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, Andra AP-fonden 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. Andra AP-fonden'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 2018, 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 – 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 tactical allocation 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 markets' derivative instruments is not standardised and 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 and to a greater extent CSA, which regulates the security between counterparties.

11 Other assets

Amounts in SEK million	31 December 2018	31 December 2017
Incoming payments, unsettled transactions	367	261
Other receivables	6	6
Total	373	267

12 Prepaid expenses and accrued income

Amounts in SEK million	31 December 2018	31 December 2017
Interest income accrued	1 393	1 449
Dividends accrued	223	171
Restitutions	130	130
Other prepaid expenses and accrued income	18	13
Total	1 764	1 763

13 Other liabilities

Amounts in SEK million	31 December 2018	31 December 2017
Outgoing payments, unsettled transactions	35	194
Accounts payable	12	5
Other liabilities	294	312
Total	341	511

14 Deferred income and accrued expenses

Amounts in SEK million	31 December 2018	31 December 2017
Accrued external management fees	19	99
Accrued interest expenses on currency forwards	686	471
Other accrued expenses	25	31
Total	730	601

15 Fund capital

Amounts in SEK million	31 December 2018	31 December 2017
Fund capital at beginning of year	345 931	324 522
Net inflows to the national pension system		
Pension contributions received	69 552	66 850
Pension disbursements to the Swedish Pensions Agency	-76 110	-73 999
Transfer of pension entitlements to EC	-1	-2
Adjustment of pension entitlements regarding previous years	2	2
Administration contribution to the Swedish Pensions Agency	-216	-226
Total payments to the national pension system, net	-6 773	-7 375
Net result for the year	-4 330	28 784
Fund capital at year-end	334 828	345 931

16 Pledged assets and contingent liabilities

Amounts in SEK million	31 December 2018	31 December 2017
Other pledged assets and contingent liabilities		
Securities on loan for which guarantees have been secured in the form of securities and cash*	995	2 814
Securities pledged in connection with exchange-cleared derivatives	480	421
Securities pledged in connection with OTC-derivatives (CSA agreement)**	946	1 669
	2 421	4 904
Commitments		
Commitments regarding future payments, non-listed holdings	21 331	21 285
Subscription commitments, certificates	4 500	4 500
	25 831	25 785

* Guarantees secured for securities on loan amount to SEK 1 087 (3 005) million.

** The book value of liabilities relating to cash collateral received in respect of OTC derivatives amounts to SEK 283 (301) million. Collateral received in the form of securities for OTC derivatives SEK 42 (380) 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. The Fund'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. For the Fund's holdings in futures exchange contracts, interest rate swaps and currency options, the appraisal is based on a theoretical model valuation, where the model's subjective elements are currently exclusively the choice of interest rate curves, volatility curves and methods for calculating and estimating future value (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 2018, the Fund's portfolios contained only a few outstanding structured OTC derivatives.

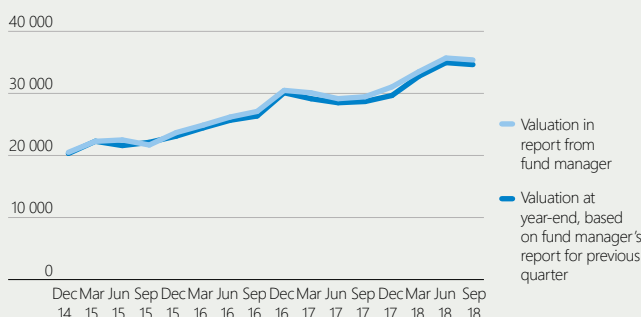
At times when the market lacks the liquidity necessary for listed papers, a higher degree of subjectivity is required in the valuation process. At such times, the market exhibits sharp differences in bid and offer rates, leading even to significant differences between one market player and another. At times like these, Andra AP-fonden 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.

Fund capital valuation – 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.

Note 17 contd.

VALIDATION OF VALUES WITH TIME LAGGED REPORTING, SEK MILLION

An analysis of the impact on the result arising from the time-lag reveals that Andra AP-fonden'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.

In the case of Andra AP-fonden, these non-market-listed assets consist of non-listed real-estate assets (14 per cent of the total portfolio), private equity funds (six per cent of the total portfolio).

Investments in unlisted private equity funds and real estate funds are valued according to IPEV (International Private Equity and Venture Capital Valuation) Guidelines or equivalent valuation principles and shall primarily be based on transactions with third parties, although other valuation techniques may also be employed.

In calculating fair market values, fund managers rely mainly on discounted cash flows, the material value method and multiple valuation. Valuation of holdings is based on the most recent interim reports published by individual fund managers. Interim reports are normally available within 90 days of the last quarterly financial statement. This means that Andra AP-fonden holdings valued at year-end 2018 were based mainly on an appraisal made on 30 September 2018, adjusted for in- and out-flows 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 2014 reveals that Andra AP-fonden'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 submitted by the fund managers.

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 in-data used for the appraisal. Andra AP-fonden classifies its assets at fair value as per the hierarchy shown.

FAIR VALUE HIERARCHY, SEK MILLION

	31 December 2018			Total fair value
	Level 1	Level 2	Level 3	
Equities and participations, listed	126 764	9 220	–	135 984
Equities and participations, non-listed	–	–	65 000	65 000
Bonds and other fixed-income securities	110 997	15 395	1 024	127 416
Derivative assets	4	2 887	–	2 891
Derivative liabilities	–	-599	–	-599
Financial assets and liabilities, valued at fair value	237 765	26 903	66 024	330 692*

	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 securities	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*

* 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 as active, but that features listed rates that are employed unadjusted at closing or observable in-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 2018 IN LEVEL 3, SEK MILLION

	Equities and participations, listed	Equities and participations, non-listed	Bonds and other fixed-income securities	Total
Value brought forward, January 2018	–	55 483	1 066	56 549
Purchases	–	4 910	243	5 153
Divestments	–	-1 642	-301	-1 943
Changes in value	–	6 249	16	6 265
Reclassifications	–	–	–	–
Total	–	65 000	1 024	66 024

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

CHANGE DURING 2017 IN LEVEL 3, SEK MILLION

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

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 farmland asset, the quality of the land, the size of the timberland 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 from timber and farming, 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. That 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:

- Profit growth through increased sales and improved margins. This will be achieved, for example, through increased market share, development or innovation of products and services, geographical expansion, operational improvements, acquisitions, consolidation etc.
- Multiple expansion achieved by the company via higher quality or through the listed market's development.
- Reduced debt.

The guidelines pertaining to the valuation of fair value for this type of investment feature valuation models which in many cases include valuations of market-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 adjournment that takes place quarterly. Andra AP-fonden's experience is that 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

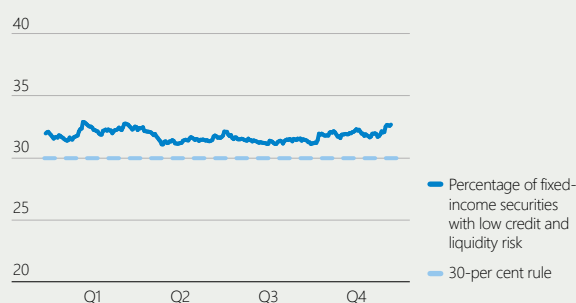
Although many different factors can affect the performance and financial status of real-estate companies, the growth in the value of the companies' real-estate portfolios constitutes the greatest risk and has the greatest impact on their net result. The market value of real estate is affected by changed 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 Andra AP-fonden'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 per cent on companies' reported pre-tax results is estimated at SEK –2.6 billion and SEK 2.8 billion respectively.

18 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 Funds' total capital may be invested in private equity funds. During 2018, 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 private equity funds was 5.5 per cent, see note 8. The liquidity risk on the liability side is very limited, consisting of derivative liabilities.

For further risk data, see section on risk management, pages 70–75.

LIQUIDITY RISK, %**FINANCIAL ASSETS AND LIABILITIES NET ACCOUNTED IN BALANCE SHEET OR SUBJECT TO RIGHT OF SET-OFF**

31 December 2018	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			
ASSETS								
Derivatives	2 887	–	2 887	–169	–326	2 392	4	2 891
Total	2 887	–	2 887	–169	–326	2 392	4	2 891
LIABILITIES								
Derivatives	599	–	599	–169	–946	–516	0	599
Total	599	–	599	–169	–946	–516	0	599

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			
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

* 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 Andra AP-fonden'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 Andra AP-fonden 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 Andra AP-fonden's board members and executive management see note 5.

Amounts in SEK million	31 December 2018	31 December 2017
Related parties, voting rights		
Vasakronan Holding AB, 25 per cent		
Interest income	9	9
Shareholders' contribution	–	–
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	46	44
Shareholder loan including accrued interest	1 033	1 077
Shareholder contribution/repayment during the year	–128	–
Investment commitment	2 771	2 458

The administration report, income statement, balance sheet and notes for 2018 have been approved by the Board of Directors

Gothenburg, 7 February 2019

Jan Roxendal
Chair

Jeanette Hauff
Vice Chair

Martina Björkman Nyqvist

Hanse Ringström

Ole Settergren

Johnny Capor

Kristina Mårtensson

Ulrika Boëthius

Christer Käck

Our audit report was submitted on 7 February 2019

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 Andra AP-fonden, Corporate Identity Number 857209-0606

Report on the audit of the annual accounts

Opinion

We have audited the annual accounts of the Andra AP-fonden for 2018. The Fund's annual accounts are included in the printed version of this document on pages 59–95.

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 Andra AP-fonden as at 31 December 2018 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 Andra AP-fonden 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 1–58 and 98–108 (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 Andra AP-fonden. 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 Andra AP-fonden for 2018.

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 Andra AP-fonden 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 Andra AP-fonden and for the administration of the Fund's activities of Andra AP-fonden. This includes, amongst other things, the on-going assessment of Andra AP-fonden's financial situation and ensuring that the organisation of Andra AP-fonden 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 Andra AP-fonden 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 Andra AP-fonden for financial year 2018.

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 Andra AP-fonden's situation. We review and test decisions taken, decision-making documentation, measures taken and other circumstances relevant to our opinion on the administration.

Gothenburg, 7 February 2019

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

ANDRA AP-FONDEN'S 20 LARGEST SWEDISH SHAREHOLDINGS*

Company name	Share of equity, %	No. of equities	Market value, SEK million	Share of voting rights	Sector
Swedbank A	0.66	7 523 389	1 488	0.66	Financials
Essity	0.90	6 329 016	1 377	0.50	Consumer goods
Husqvarna B	2.77	15 948 426	1 048	1.00	Consumer goods
Fastighets AB Balder B	2.31	4 155 593	1 047	1.48	Real estate
Hexagon B	0.68	2 453 337	1 001	0.49	IT
Elektro B	2.34	8 977 046	946	1.73	Healthcare
SEB A	0.47	10 244 512	882	0.47	Financials
Investor B	0.29	2 245 933	844	0.06	Financials
Atlas Copco A	0.32	3 887 643	818	0.44	Industrials
Volvo B	0.32	6 716 627	779	0.10	Industrials
Volvo A	0.06	1 382 934	161	0.22	Industrials
Sandvik	0.49	6 143 004	776	0.49	Industrials
Boliden	1.46	3 987 148	765	1.46	Raw materials
Hennes & Mauritz B	0.36	5 984 800	754	0.18	Consumer goods
Alfa Laval	0.84	3 522 639	668	0.84	Industrials
Swedish Match	1.01	1 772 403	619	1.01	Consumer goods
Tele2 B	0.74	5 121 644	578	0.57	Telecoms
Trelleborg B	1.28	3 477 070	485	0.66	Industrials
Skanska B	0.73	3 078 572	434	0.52	Industrials
Coor Service Management Holding	6.14	5 884 628	414	6.14	Industrials
Nibe Industrier B	0.84	4 214 556	383	0.41	Industrials

* The above table lists Andra AP-fonden's 20 largest holdings in Swedish equities, by worth.

A complete list of Andra AP-fonden's holdings may be found on the Fund's website.

ANDRA AP-FONDEN'S HOLDINGS IN UNIT TRUSTS

Name	No. of equities, participations	Fair value, SEK million
GAM FCM Cat Bond Inst Initial Series	2 420 354	3 336
Genesis Emerging Markets Class A	5 475 561	2 863
Barings Global Multi Credit Strategy Fund 2	3 026 617	2 551
Ares Strategic Investment Partners IV	250 000 000	2 244
Generation IM Global Equity Fund Class I 20071201	545 331	2 086
Generation IM Global Equity A Shares LTA20 090401	398 667	1 487
Elementum Zephyrus Total Return Cat Bond	123 533	1 268
CVC Credit Partners	1 000 000	1 152
CS Iris S Fund Ltd.	115 143	1 099
AQR Merger Arbitrage fund	1 021 369	1 086
Generation IM Global Equity Fund Class I 20090401	276 118	1 064
GSO Global Dynamic Credit Feeder Fund Ireland A	757 354	771
Generation IM Asia Fund	475 105	634
AQR Opportunis Convertible Arbitrage Offshore Fund	525 937	529
MG Lion Credit Opp Fund XIV – Series 1 Share Class	39 000	440
Elementum Zephyrus Total Return Cat Bond Class S	242	2
GAM FCM Cat Bond 2018 series 10	1 640	1
GAM FCM Cat Bond 2018 series 7	1 599	1
GAM FCM Cat Bond 2017 series 7	1 582	1
GAM FCM Cat Bond 2018 series 4	1 565	1
GAM FCM Cat Bond 2017 series 4	1 551	1
GAM FCM Cat Bond 2018 series 1	1 556	1

ANDRA AP-FONDEN'S 20 LARGEST FOREIGN SHAREHOLDINGS*

Company name	No. of equities	Market value, SEK million	Sector
Nordea Bank	13 944 157	1 040	Financials
AstraZeneca	1 326 356	894	Healthcare
Kindred Group	9 471 851	773	Consumer goods
ABB Ltd	4 235 052	723	Industrials
Kweichow Moutai Co., Ltd	775 193	591	Consumer goods
Autoliv	910 036	573	Consumer goods
Millicom International Cellular	637 775	358	Telecoms
Ping An Insurance Group Co	4 930 913	357	Financials
Jiangsu Hengrui Medicine	5 089 436	347	Healthcare
Gree Electric Appliances Inc.	7 210 155	332	Consumer goods
China Merchants Bank	10 074 675	328	Financials
Kambi Group	1 406 333	267	Consumer goods
Beijing Orient National Communication Science	19 411 172	260	IT
Hangzhou Hikvision Digital Technology	7 748 191	258	IT
Medtronic	274 488	221	Healthcare
Beijing Venustech	8 233 892	219	IT
Visa	186 374	218	IT
Midea Group	4 491 731	214	Consumer goods
Roche Holding	94 630	213	Healthcare
Yonghui Superstores	20 073 846	204	Consumer goods

* The above table lists Andra AP-fonden's 20 largest holdings in foreign equities, by worth.

A complete list of Andra AP-fonden's holdings may be found on the Fund's website.

ANDRA AP-FONDEN'S HOLDINGS IN BONDS AND OTHER FIXED-INCOME SECURITIES*Swedish nominal bonds, five largest holdings*

Bond	Fair value, SEK million
Swedish Government 1054	3 647
Swedish Covered SBAB #142	1 985
Stadshypotek AB #1586	1 859
Stadshypotek AB #1584	1 638
SEB #574	1 514

Global government bonds, five largest holdings

Bond	Fair value, SEK million
France O.A.T.	318
Intl Devel Assoc	268
Eurofima	221
Stadshypotek AB	220
Sweden Kingdom	176

Global credits, five largest holdings

Bond	Fair value, SEK million
Microsoft Corporation	652
Credit Suisse	534
Berkshire Hathaway Inc.	476
Qualcomm Inc.	444
Credit Suisse	400

Detailed information about Andra AP-fonden's holdings in fixed-income securities is available on the Fund's website.

*“In 2019, we continue **our** work to do the very best for **Sweden’s** current and future **pensioners**”*



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, Andra AP-fonden is a state agency. There is however a difference between the AP funds and other state agencies. The greatest difference is that the AP funds enjoy a 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 Andra AP-fonden, which is appointed by the Swedish Government, comprises nine Members. Two are appointed in accordance with proposals submitted by organisations that represent employees' interests, 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 2018, the Government decided on a new Board with the change that Vice chairman Jan Roxendal was appointed new Chairman after Marie S. Arwidson. The member, Jeanette Hauff, was appointed Vice chairman. Martina Björkman Nyqvist and Hanse Ringström were appointed as new Members in place of Marie S. Arwidson and Ola Alfredsson. 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 2018 have been determined.

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

Member of the Board	Remuneration Committee	Risk Committee	Audit Committee	Attendance/ total meetings	Comments
Marie S. Arwidson	X		X	2/2	Left the board in May 2018
Jan Roxendal	X		X	6/6	
Jeanette Hauff	X	X		6/6	
Ola Alfredsson				2/2	Left the board in May 2018
Ole Settergren				6/6	
Ulrika Boëthius				5/6	
Christer Käck		X		6/6	
Johnny Capor			X	6/6	
Kristina Mårtensson				5/6	
Martina Björkman Nyqvist				4/4	Appointed in May 2018
Hanse Ringström				4/4	Appointed in May 2018

the Board falls outside the terms of the Swedish Pension Funds Act, it is governed by the rules of procedure annually adopted by the Board.

Fees and other remuneration paid to the Board Members are determined by the Swedish Government. The remuneration paid per annum amounts to SEK 100 000 for the Chair, SEK 75 000 for the Vice Chair and SEK 50 000 for the other Members of the Board. The Government has determined that remuneration totalling SEK 100 000 may be paid for committee work carried out by Board Members. 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 to the amount of SEK 30 000 and to individual Members to the amount of SEK 25 000. For work on the Audit Committee, remuneration has been paid to the amount of SEK 20 000 to the Chairman and to the amount of SEK 15 000 to individual Members.

The work of the Board

The most important tasks assigned to the Board of Andra AP-fonden 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 held six regular meetings during the year. In October, a longer meeting was held, which, among other things, dealt with the proposal for revised regulations for the AP Funds that the Pension Group had submitted and the common guidelines between the AP Funds that are included in the new regulations and strategic issues, focusing on the changes in the strategic portfolio that could be proposed at the Board meeting in December. 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, Andra AP-fonden 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 2019.

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, as well as the strategic allocation of assets 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 to 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 Fund's CEO and Head of Performance and Risk Management is the speaker of the Risk Committee.

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. In 2018, among other activities, the Risk Committee has reviewed developments concerning the Fund's financial and operative risks, as well as reviewing its benchmark indices and alternative investments. At each meeting, the current risk situation as well as the Fund's return developments are also brought up and discussed.

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 as well as external and internal auditing. The Audit Committee comprises two Members of the Board. The Fund's CEO, Head of Business Support and Head of Finance are the speakers in the Audit Committee plus the Fund's external and internal 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 2018, of which one was in conjunction with the Board's Risk Committee for an annual review of the Fund's work on operational risks, compliance reporting and internal audit assignments. The main work of the Committee during the year revolved around monitoring of the Board's chosen internal audit assignments and the Fund's internal work on operational risks, but also on discussions on follow-up of the level of internal control for strategic partners and discussions with the Fund's external auditors.

Evaluation of Board performance

The performance of the Board is subject to annual evaluation. The evaluation was carried out by an external consultant through a survey in early 2018. The result of the evaluation was presented to the Board at the meeting in April, and was also discussed. Considerable emphasis is placed on continually developing the work of the Board, which already functions well, even regarding collaboration with the Fund's executive management.

Audit

Andra AP-fonden's auditors are appointed by the Swedish Government. On May 24, 2018, the Government decided to appoint Peter Nilsson and Helena Kaiser de Carolis from PwC as auditors of Andra AP-fonden. PwC is also tasked with conducting the audits of the other AP Funds, and Peter Nilsson has been appointed as coordinating auditor for the AP funds. This mandate applies until adoption of the Fund's income statement and balance sheet for 2018.

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 Andra AP-fonden 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 Andra AP-fonden'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 they have the delegated responsibility to implement the Fund's decided risk strategy and to ensure that the Fund stays within the defined limits as required by law, determined 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 respect 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. A decision on the annual internal audit assignment will be taken by the Board. Reporting of the results from the internal audit will take place for the Audit Committee and the Board as frequently as the Committee decides. The internal audit assignment for 2018 concerned the examination of the Fund's management of critical calculation models in the operations. The assignment also included an annual compliance check within selected, identified internal processes. Reporting of completed audits will take place in February 2019.



Standing from left: Johnny Capor, Hanse Ringström, Kristina Mårtensson, Christer Käck and Martina Björkman Nyqvist.
Sitting from left: Ulrika Boëthius, Ole Settergren, Jeanette Hauff and Jan Roxendal.

Board of Directors

Jan Roxendal

Chair since 2018, Member since 2017. Board member of Catella AB and Magnolia Bostad AB and member of the Sarafimer Clinic. Born 1953.

Jeanette Hauff

Vice chair since 2018, Member since 2010. Ph.D. in economics. Lecturer at the Gothenburg Business School and Borås University. Member of the Board of QQM Fund Management AB. Born 1965.

Ole Settergren

Member of the Board since 2013. Head of the Swedish Pensions Agency analysis department. Born 1964.

Ulrika Boëthius

Member of the Board since 2012. Chair of the Financial Association. 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. Self-employed. Chair of Örby Housing Development AB, as well as a member of APP Properties AB and Småland Housing development, among others. Born 1966.

Kristina Mårtensson

Member of the Board since 2015. M.Sc. (Econ). Administrative Director for the Kommunal trade union. Born 1966.

Christer Käck

Member of the Board since 2014. M.Sc. (Econ). Self-employed. Board member of Aktie-Ansvar AB. Member of the placement council for the Journalist Association. Born 1953.

Martina Björkman Nyqvist

Member of the Board since 2018. Ph.D. in Economics. Associate professor in national economics at the Stockholm School of Business. Born 1974.

Hanse Ringström

Member of the Board since 2018. MBA and BA. Self-employed. Chair of Katalysen & Partners AB AND CHM Nordic AB. Board member of SEB Ukraine, Sweden China Trade Council, and others. Born 1948.

Executive Management



Eva Halvarsson

CEO. Employee since 2006. Other assignments: board member of Vasakronan AB, Kungliga Operan AB, UN-PRI, Gothenburg prize for sustainable development, Engineering Science Academy (IVA) and FinansKompetensCentrum. Born 1962.



Ulrika Danielson

Head of Communication & HR. Employed since 2009. Born 1965.



Ola Eriksson

Head of Business Support. Employed since 2001. Other assignments: Centre for Finance (CFF) at the Business School of Gothenburg University. Born 1965.



Hans Fahlin

Chief Investment Officer (CIO). Employed since 2010. Other assignments: board member of AFS Intercultural Education Sweden, chair of the Centre for Finance (CFF) at the Business School of Gothenburg University, board member of STIM and chair of The Institute of Quantitative Research Europe (INQUIRE). Born 1957.



Martin Jonasson

General Counsel. Secretary to the Board. Employed since 2001. Other assignments: member of the institute Friends of the Blind. Born 1964.



Henrik Westergård

Head of Performance and Risk Management. Employed since 2012. Other assignments: board member of Varbergs Sparbank. Born 1973.

Auditors

Helena Kaiser de Carolis

Authorised Public Accountant, PwC.

Peter Nilsson

Authorised Public Accountant, PwC.

Financial 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 management

Asset management actively deviates from the benchmark index in order to create added value.

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 Andra AP-fonden's strategic portfolio, against which the Fund's management performance is measured.

Brokerage commission

Brokerage commission is the fee paid to the bank when trading in shares.

Credit risk/counterparty risk

Credit risk: Credit risk refers to the risk that an issuer may become insolvent or be given a lower credit rating.

Counterparty risk: Refers to the risk that the other party may be unable to meet its business obligations.

CSA agreement

An annex to the ISDA agreement that regulates how the party with an outstanding debt (unrealised loss) must provide collateral for the debt in the form of liquid funds or securities.

Derivatives

A collective name for a form of securities. The most common derivatives are options, futures, warrants and swaps. A characteristic of financial derivatives is that they are linked to events or conditions at one specific point in time in the future.

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

A derivative instrument involving a contract to purchase foreign currency at some future date at a predetermined rate of exchange.

FX Hedging

Currency hedging means determining an uncertain future exchange rate between two currencies by using derivatives. It protects against foreign exchange rate risks.

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 lower price.

Market risk

The market risks most relevant to Andra AP-fonden 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.

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 with over 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

Andra AP-fonden'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.



*“We will continue to **focus** on what is **best for Sweden’s pensioners** by thinking **long-term** and being **sustainable** in our strategy, while at the same time **seeking constant improvements**”*



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