

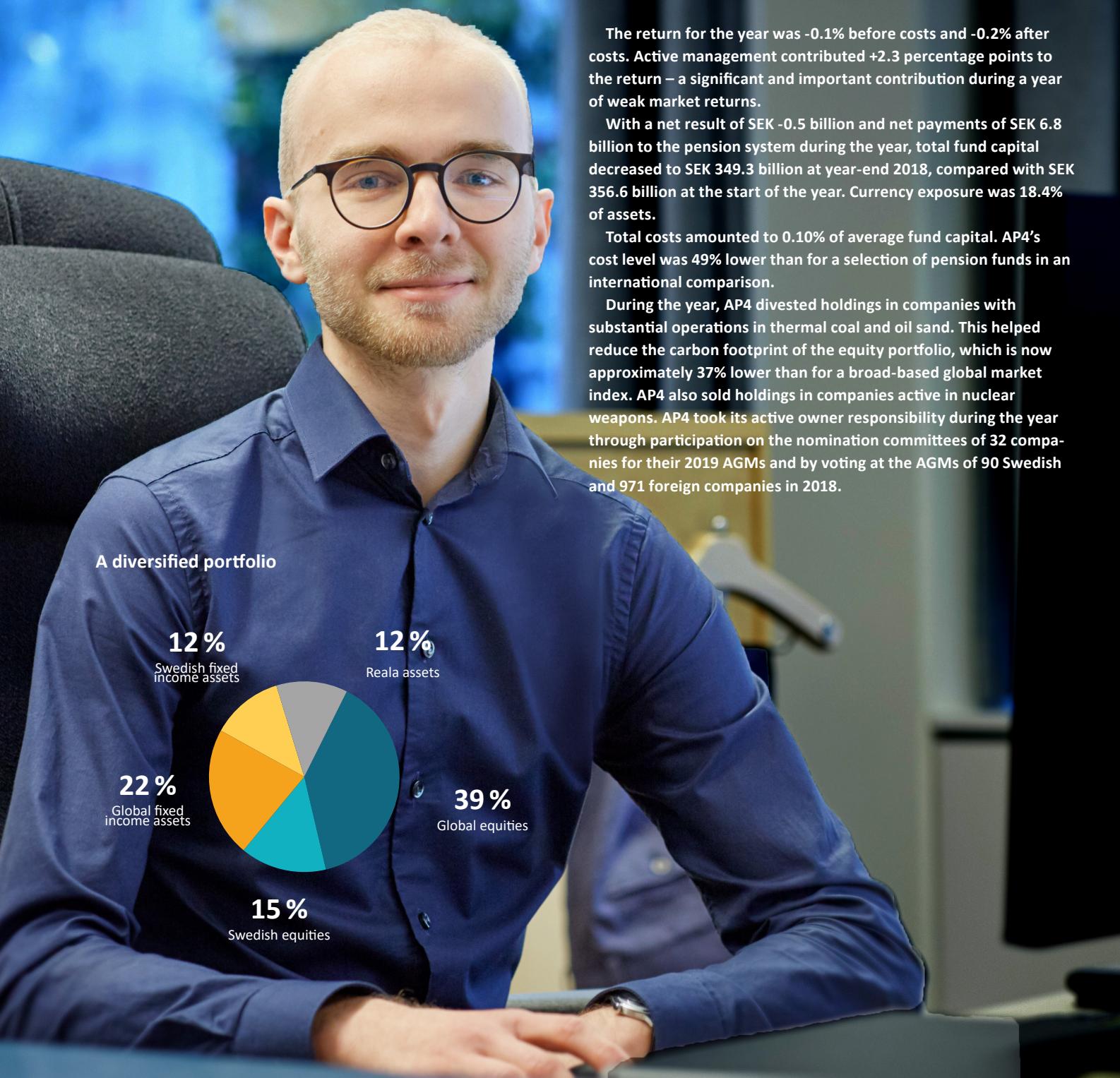
# Annual Report 2018

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AP4's mission is to contribute to the financial security of current and future pensioners by managing part of the national pension system's buffer capital.



# A turbulent year, but active management delivered





**349**

SEK billion in fund capital

**-0,5**

SEK billion result for the year

**-0,2**

% return after costs

**+2,3**

% in active return

**0,10**

% in management costs

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The Fourth Swedish National Pension Fund's (AP4) annual report summarises AP4's management during 2017.

The Global Reporting Initiative (GRI) publishes international guidelines for sustainability reporting that are used by companies and organisations around the world. AP4 reports in accordance with the GRI Sustainability Reporting Standards (SRS). The GRI Index can be downloaded at [www.ap4.se](http://www.ap4.se).

# AP4 and the pension system

**AP4's mission is to contribute to the financial security of current and future pensioners by managing part of the Swedish national pension system's buffer capital.**

**AP4's long-term perspective, responsibility as an owner and strong commitment to sustainability create opportunities for high returns at a low cost. In this way, AP4 works for more secure pensions.**

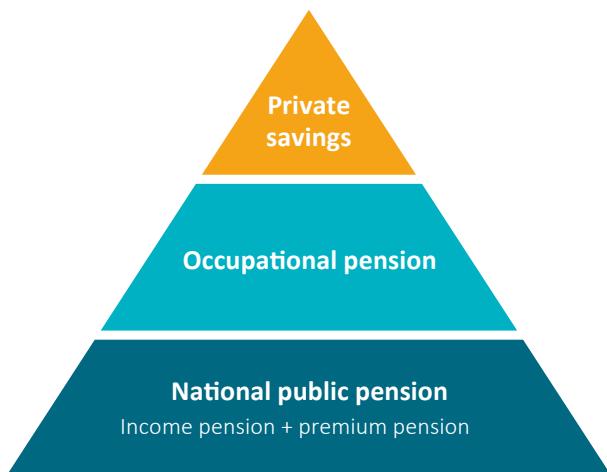
## The foundation of Sweden's pension system

The foundation of Sweden's pension system is the national public pension, which is made up of two parts: income pension and premium pension. Income pension is a pay-as-you go system where the year's pension contributions paid by the actively working population are used to pay pensions to pensioners during the same year. Premium pension is a separate part of the national pension where contributions are vested in the individuals' own names, and the pension savers have a say in which funds their money will be invested in.

## Bridging the generation gap

If the year's contributions to the income pension system from people who are actively working are less than the year's pension disbursements, the difference is taken from the AP Funds' buffer capital, and vice versa. AP4, together with AP1, AP2, AP3 and AP6 manage this buffer capital. Since 2009 and through 2018 AP1-AP4 each paid out SEK 51 billion to the pension system. These payments from the AP Funds have been necessary mainly as a result of demographic factors, such as the large number of people born during the 1940s, who are now pensioners. The pension system has been designed specifically for this purpose. The system is also generation-neutral, that is, one generation does not benefit at the expense of another. The AP Funds are expected to continue making net disbursements to the pension system for another

## The components of Sweden's pension system



Swedish pensions come from the national pension system, supplemented by occupational pensions and private savings.

some 20 years. Thereafter, the AP Funds are expected to once again receive net inflows.

If the pension system comes into a financial imbalance, i.e., its liabilities become larger than its assets, an automatic balancing is activated. As a result of this balancing, income pensions are lowered as long as the assets are lower than the pension obligations. A balancing affects both pensioners and those who are actively working. Such a balancing was activated in 2010, and it took until 2018 until the reduction in pensions carried out in 2010 was recovered.

## Modernised investment rules for the AP Funds

In November 2019 Swedish Parliament (Riksdagen) decided on changed rules for the AP Funds, which took effect on 1 January 2019. The changes in the investment rules are planned to be implemented in two steps. The changes that have now been adopted pertain to the first step, which entails a modernisation of the investment rules for AP1-AP4. The AP Funds may invest a higher proportion of their capital in illiquid assets, the minimum required level of fixed income assets in the Funds' portfolios has been reduced, and the requirement for external asset management has been removed. In addition, a stipulation has been added that the AP Funds are to manage pension assets in an exemplary manner through responsible investments and responsible ownership. The goal of exemplary management is to be achieved without the AP Funds compromising on the overarching goal of achieving a long-term high return. As a second step, the opportunities are being investigated for the AP Funds to make direct investments in unlisted infrastructure companies and illiquid credits, and co-investments in unlisted companies.

## Guiding principles in AP4's management

AP4 has unique prospects for long-term investment. AP4 makes sustainable investments with focus on the climate and environment, and takes ownership responsibility.

## AP4 invests long-term

The pension system's need of payments from the AP Funds is steady and stretches over a long time horizon. AP4 has the opportunity to plan for these payments and can therefore invest very long-term. This creates unique opportunities to maintain a long-term perspective and withstand market volatility and illiquidity for the benefit of long-term returns.

## AP4 invests sustainably

AP4 believes that a sustainability perspective is a prerequisite for long-term successful asset management. Therefore, AP4 integrates sustainability with its Climate & Environment focus in its investment processes. In this way, AP4 achieves well balanced

risk, capitalises on business opportunities, and can achieve a higher return over time.

## AP4 takes responsibility as owner

Being one of the largest shareholders on the Stockholm Stock Exchange entails both opportunities and responsibility. AP4 takes its responsibility as an active owner by taking a position on important issues, engaging in close dialogue and communicating clear expectations to the boards and managements of the companies in which AP4 invests. AP4 serves on nomination committees and votes at general meetings of shareholders. AP4 also contributes to well-working markets.

## Changes in the AP Funds Act that took effect on 1 January 2019:

- A minimum of 20% of the portfolio shall be invested in fixed income securities with low credit and liquidity risk. This is a reduction of the previous requirement of a minimum of 30% of the portfolio.
- Investments in illiquid assets may amount to a maximum of 40% of the portfolio. Previously, a maximum of 5% of the portfolio could be invested in unlisted assets. The new limit also encompasses unlisted real estate investments, in contrast to the previous rule.
- The previous requirement that a minimum of 10% of the portfolio must be externally managed has been eliminated.
- Management of pension assets shall be done in an exemplary manner through responsible investments and responsible ownership. The goal of exemplary asset management shall be achieved without the AP Funds compromising on the overall goal of achieving a long-term high return.

YEAR AT A GLANCE, KEY RATIOS	2018	2017	2016	2015	2014	2013	2012	2011	2010
Profit for the year, SEK bn	-0.5	30.1	30.5	20.1	40.2	37.0	23.4	-1.6	21.2
Net flow to national pension system, SEK bn	-6.8	-7.4	-6.6	-4.9	-5.1	-6.9	-3.8	-1.2	-4.0
Fund capital at year-end, SEK bn	349.3	356.6	333.9	310.0	294.9	259.7	229.6	210.0	212.8
Total return before costs, %	-0.1	9.2	10.1	6.9	15.8	16.5	11.3	-0.7	11.0
Total return after costs, %	-0.2	9.1	10.0	6.8	15.7	16.4	11.2	-0.7	10.9
Operating expenses as % of assets under management	0.06	0.06	0.06	0.06	0.07	0.08	0.08	0.08	0.09
Commission expenses at % of assets under management	0.04	0.04	0.04	0.04	0.04	0.04	0.02	0.01	0.01
Total costs (operating expenses & commission expenses) as % of assets under management	0.10	0.10	0.10	0.11	0.11	0.11	0.10	0.10	0.10

# Letter from the CEO

**After a succession of years with stable economic development and favourable returns, 2018 was very turbulent, and many investments had weak or negative returns. AP4's return for 2018 was -0.2% after costs. In this context it is gratifying that AP4 succeeded at generating an active management result of a full +2.3 percentage points towards AP4's return relative to our benchmark portfolio. This significantly limited the impact of the weak markets on the portfolio's return. During the year, Swedish Parliament decided on a first step towards more modern investment rules for the AP Funds, which took effect on 1 January 2019. It is of utmost importance that the second step announced in the modernisation of investment forms and types of instruments is carried out as planned in 2019.**

## Challenging year with negative return

In our 2017 Annual Report we discussed the future challenges we saw for the financial markets. Our conclusion was that we feared a period of lower anticipated returns and considerably higher volatility than what we had experienced during the preceding ten years. Against this background, combined with the considerably more robust financial position for the income pension system today than at its start in 2001, ahead of 2018 we determined that it would be more prudent to revise AP4's long-term return target downward rather than raise the investment portfolio's risk level.

Unfortunately, some of the fears we raised in the 2017 Annual Report unfolded already in the following year. 2018 was a year of periodically very high volatility along with weak and in many cases negative returns on financial assets. This can be illustrated in figures via the trend break we noted for AP4's return. During the preceding ten-year period 2008–2017, AP4 delivered an average

annual return of 7.3%, and fund capital grew from SEK 207 billion to SEK 357 billion, despite net outflows of SEK 43 billion to the pension system. This can be compared with AP4's return for 2018, which ended at -0.2% after costs and a result of SEK -0.5 billion. The fund capital thereby decreased by SEK 7.3 billion to SEK 349.3 billion after the year's net disbursements of SEK 6.8 billion to the pension system.

**"The value of broad-based and high-quality active management has proven to be extremely valuable in the prevailing low-return environment."**

## Strong active return in turbulent markets

Naturally, the year's negative result is unfortunate, both for the national pension system and for us who work at AP4. At the same time we should remember that this is the first year since 2011 that AP4 has posted a negative result and the second year since 2008. In this context it is also important to remember that the annualised return for the last 10-year period (including 2018) is clearly positive and amounted to 9.9%.

It is therefore gratifying that AP4's active management was highly successful in 2018 and significantly tempered the impact of the weak market on AP4's total return. The active return for the year relative to our benchmark portfolio was +2.3 percentage points, and the positive earnings contribution was thus SEK 8.5 billion.

Most asset management units made a positive contribution to the active return, with Swedish equities and real estate at the foremost contributors. This clearly illustrates the value of broad-



based and high-quality active management in the prevailing low-return environment.

### **An adapted and refined investment operation**

Global growth is flattening. At present this is more noticeable in Europe than in the USA, and we believe it is likely that individual countries may fall into a technical recession (two quarters of negative growth). However, a significant part of such a development has been taken into account in the financial markets' expectations given the negative end to the year. Despite this we believe that the negative uncertainties dominate; we are thinking mainly of the central banks' actions, Brexit, and developments in the various, complex trade discussions that are currently being held. The existence of the many different and distinct structural, political and geopolitical risks that we can observe today also entails that on the whole we can expect significant volatility also in 2019.

Over the long term we expect to see relatively weak economic development in the industrialised countries. Key factors behind this scenario include a normalisation of monetary policy, areas with a high level of debt, the demographic trend and weak political decision-making resolve. On top of this we are seeing indications of increased regional division, protectionism and mistrust in existing trade agreements, and a weakening of supranational institutions. If the tendencies in this direction continue and intensify, it could have substantially negative consequences economically, politically and socially.

To prepare ourselves for the major future challenges we see in conducting successful pensions management, in recent years we have re-examined and refined our investment platform. Three central starting points have guided us in our change work: first,

build upon our historical strengths; second, maximally utilise the unique prospects for long-termism and flexibility that we have as a buffer fund in the public pension system; and third, build competence and structure to be prepared for the demands on asset management that our rapidly changing world entails.

More concretely I can mention the development and implementation of a new portfolio and decision structure with an accompanying change of the investment organisation. These changes have entailed, among other things, that we have added resources to the Strategic Allocation & Quantitative Analysis and Alternative Investments units. This has been done in part to strengthen our overarching approach to AP4's investment portfolio and in part to develop our competence and ability with

**“We can expect a period of lower anticipated returns and considerably higher volatility than what we experienced during the preceding ten years.”**

respect to illiquid investments. A more overarching ambition has been to gradually broaden AP4's risk profile, especially with focus on investments with long- and medium-term horizons.

### **Modernised investment rules**

I have a very positive view of the initiative that was taken by the politicians in the so-called Pensions Group to modernise the

AP Funds' investment rules. Such a modernisation is necessary to give the AP Funds the conditions for modern asset management that can generate the best possible returns at the lowest possible cost. A modernisation that gives the AP Funds greater flexibility to perform their mission will ultimately benefit today's and tomorrow's pensioners. During 2018 a number of questions surrounding the AP Funds' future investment rules were sorted out. The first step of the modernisation, which took effect on 1 January 2019, gives the AP Funds greater flexibility in asset allocation, mainly entailing lower requirements to hold liquid fixed income assets with high credit ratings and greater scope for illiquid investments.

It is very important that the modernisation as it pertains to overall asset allocation is followed by a corresponding modernisation of investment forms and types of instruments. It is therefore very positive that the Pensions Group – in a second step – is looking into the opportunities for direct investments in unlisted infrastructure companies, illiquid credits and co-investments in unlisted companies. A modernisation also in this area is a prerequisite for the AP Funds' ability to purposefully and cost effectively use the greater freedom to act that the change in the first step conveys. I cannot stress enough the importance that this second step in the modernisation of our investment rules is also carried out.

## **"It is of utmost importance that the second step announced in the modernisation of investment forms and types of instruments is carried out as planned in 2019."**

AP4 invests very long term, and today we have a market situation with strained valuations in many cases. For this reason, portfolio changes will be made cautiously and stepwise over several years, and we will put great emphasis on ensuring that every individual investment can be realised on solid grounds.

### **Higher level of ambition regarding sustainability**

Sustainability is one of the greatest challenges of our time for which the political system, the business sector and civil society must work together to find solutions. More specifically, AP4 has identified climate change as one of the greatest systemic risks for long-term asset values. Reducing the carbon footprint is a prerequisite for stable future economic development and thus for our opportunities to perform our mission over time. Our hope is that AP4's sustainability work can help influence development and that we, together with other investors, can contribute to a solution for the global climate challenge.

It is for these reasons that I welcome the fact that sustainability has now been added to the wording of the AP Funds Act with

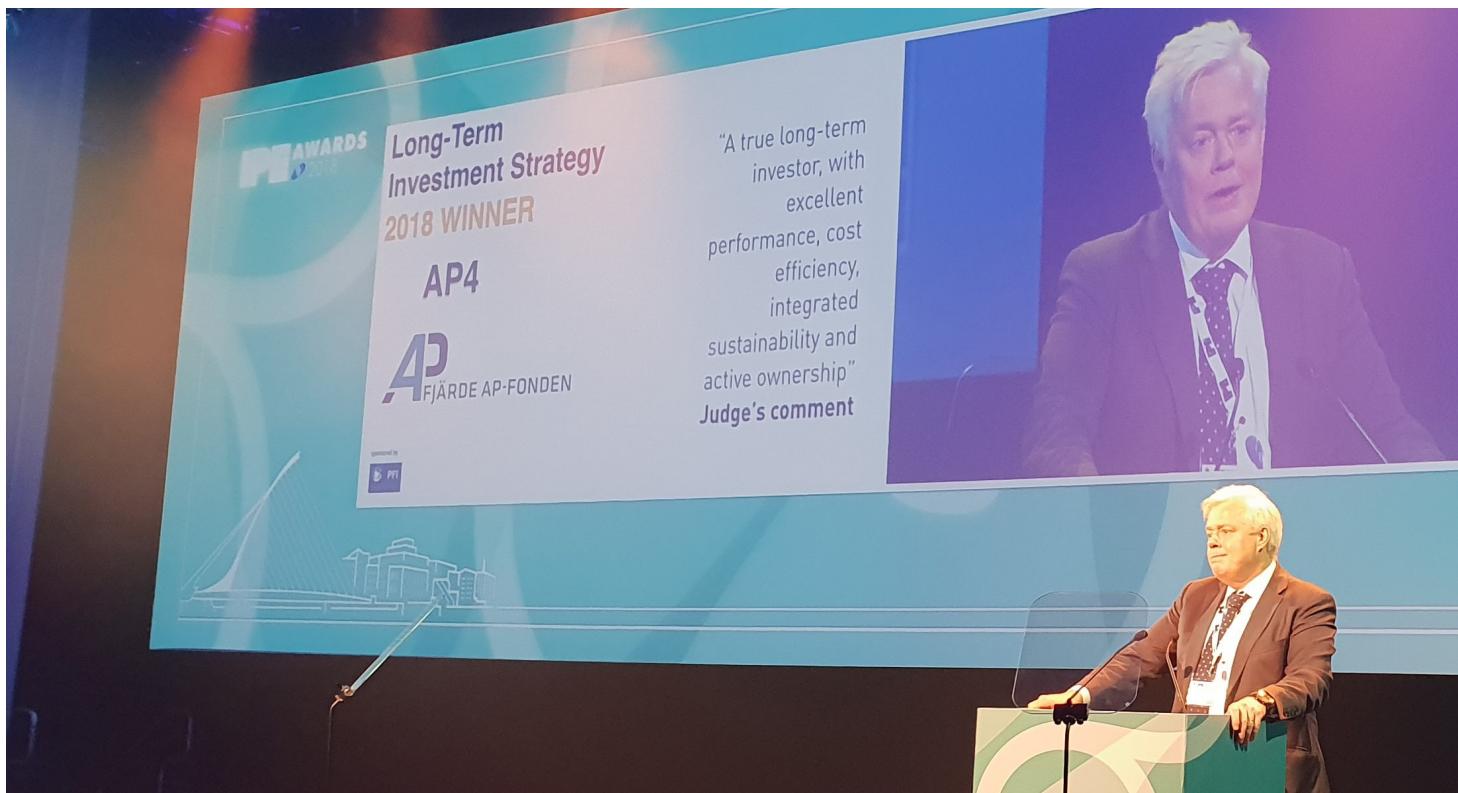
the clarification that asset management shall be conducted in an exemplary manner through responsible investments and responsible ownership. In this respect as well, the change is a modernisation and adaptation to the requirements today that are put on a long-term institutional asset manager with high sustainability aspirations. AP4 has a long tradition of working with sustainability issues in its asset management and today is at the international forefront in this respect. Certainly, the new legal wording spurs us to continue developing in the area of sustainability with the ambition to steadily retain our strong position over time.

**"I welcome the fact that sustainability has now been added to the wording of the AP Funds Act with the clarification that asset management shall be conducted in an exemplary manner through responsible investments and responsible ownership."**

During 2018 AP4 continued its work on reducing the carbon exposure in the global equity portfolio, which included among other things the sale of companies with exposure to thermal coal and oil sand. These constitute fossil fuels with high CO<sub>2</sub> intensity per unit of energy, which we believe must be phased out as part of a global shift to a low fossil fuel society in line with the UN Framework Convention on Climate Change and the Paris Agreement. On top of this we are working continuously on developing our strategies for low carbon investments, where we are looking into the opportunity to broaden them to also include other types of resource efficiency, such as energy and water use, which benefits sustainability as well as companies' profitability.

During 2018 AP4 also intensified its work with climate scenario analyses and on analysing and understanding important sustainability trends. Prioritised results of this work include greater competence that can be applied broadly in our investment work and a stronger ability to identify investments aimed at contributing to or benefiting from sustainable development. Examples of such investments that AP4 made in 2018 are a fund that invests in and contributes to the development of green bonds in emerging markets and a fund that invests in unlisted growth companies that have a market position and business orientation that are aligned with the transition to a sustainable society.

The intention of Non-Proliferation Treaty is to achieve nuclear disarmament over time. Today we are seeing significant modernisations and upgrades of nuclear arms programmes in many countries, which goes against the objectives of the Non-Proliferation Treaty, in AP4's opinion. Ahead of 2019 AP4 has therefore decided to divest companies with operations related to this modernisation and upgrading.



### **Strong focus on corporate governance**

Active ownership responsibility has long been a core principle for AP4. AP4 is a significant shareholder in the Swedish stock market, and we are the largest or second-largest owner in a dozen or so companies. As a long-term and engaged owner, AP4 acts with the goal of contributing to companies' operations so that they develop, improve and are conducted responsibly and transparently. During 2018 AP4 exercised its owner responsibility by voting at the Annual General Meetings of 90 Swedish and 971 foreign companies. Ahead of the 2019 AGM season, AP4 is participating on the nomination committees of 32 Swedish companies.

### **Awards for AP4**

AP4 received recognition through several awards in 2018. AP4 was ranked at the top among the world's 100 largest pension funds on their approach to climate-related risks and opportunities in the international analysis conducted by the Asset Owners Disclosure Project (AODP) for 2018. The Task Force on Climate-related Financial Disclosures (TCFD) was formed in 2016 by the G20 with the mission to make recommendations for climate reporting. The AODP has analysed the Fund's climate work based on the framework created by the TCFD.

AP4 also received a full five distinctions at the Investment & Pensions Europe (IPE) Awards in 2018. Of these, I would like to specifically mention the Gold Award for Best Long-Term Investment Strategy, which AP4 has thereby won for the third year in a row.

Naturally, we are happy to be recognised for our way of working and asset management. It is inspiring and motivates us in our continued development work.

In closing I would like to extend my great thanks to all of AP4's employees. It was challenging year with respect to asset management, and the year's negative result is something weighs heavily upon us. However, the very strong asset management result that AP4 has shown significantly limited the impact of the weak market on the Fund's total return. In parallel with our continuing asset management activities, significant actions have been taken to develop our operations. We employed major measures during the year with respect to the portfolio structure, and we are gradually reshaping our investment portfolio, we have strengthened our competence in several key areas, we have further advanced our position as a global actor in sustainability, and we have yet again demonstrated our strength in managing Swedish equities and real estate.

Stockholm, 20 February 2019

Niklas Ekvall, CEO

# Return targets

**AP4 has two different targets for evaluating the portfolio's return. One measures the portfolio's real (inflation-adjusted) total return, and one measures the operative management's active return relative to a benchmark portfolio. During 2018 AP4 implemented a new, overarching portfolio and asset management structure with new return targets that are effective as from 2018. The total return target is an average annual real return of 3%. The operative management's return target is an average annual active return (above a benchmark portfolio) of 1%.**

## Long-term analysis with 40-year perspective

AP4's long-term analysis over a 40-year perspective is conducted every three years. In this analysis AP4 strives for the best combination of anticipated return and risk so that the pension system will be strengthened without one generation benefiting at the expense of another. The most recent long-term analysis showed that a 4% average annualised real return over 40 years is ambitious but possible to achieve with a balanced level of risk based on the pension system's needs. This is a decrease from the assessment of an average annualised real return of 4.5% for AP4 that applied prior to 2018. At the same time, the pension system is more robust today than at its start in 2001. The AP Funds' assets today make up approximately 15% of the pension system's total assets, compared with approximately 10% of the assets at the system's start. The pension system's strong balance sheet, combined with a shorter remaining time of disbursements to the system, also entail a structurally lower return requirement. This warrants a lower need for risk-taking, which thereby leads to a lower anticipated real return but also a lower risk for substantial, negative returns.

## Medium-term analysis with 10-year perspective

The long-term analysis is complemented by a medium-term analysis with a 10-year perspective, which in greater detail can take into account the prevailing economic situation and dynamic according to this time horizon. This analysis is performed yearly, and based on it the Board sets the medium-term return target and decides on AP4's dynamic, normal portfolio (DNP), which is a benchmark portfolio made up of various market indexes and that describes an appropriate, medium-term asset allocation.

The markets have performed very strongly during the last ten-year period, and valuation levels are generally high. Combined with the extremely low level of interest rates, it has been determined that it is now hard in a medium-term perspective to achieve a return on par with the one AP4 has had during the last ten years. On the contrary, AP4's assessment is that a medium-term return target of a 3% average annualised real return during the next ten years is achievable, albeit ambitious. AP4 adopted this real return target ahead of 2018.

In summary, AP4 has a real return target of an average of 3% per year from a medium-term perspective, at the same time that AP4 has determined that it is possible with a balanced measure of risk to achieve a real annualised return of 4% over 40 years. The implication of this is that, following an initial low-return environment, a normalisation takes place where a real return higher than 4% will once again be reasonable.

## Active asset management target

The continuing asset management is handled by AP4's operative asset management organisation. The portfolio's asset allocation and active asset management decisions are based on the benchmark portfolio (DNP) adopted by the Board of Directors and are steered with the help of structured risk budgeting in relation to the asset allocation assigned by the Board to the DNP.

In addition, the Board sets a risk scope within which the operative asset management shall act. For 2018, AP4's risk mandate was 5%, and the active asset management target was a 1% annual excess return in relation to the dynamic normal portfolio (DNP). The continuing active asset management is evaluated over moving five-year periods.

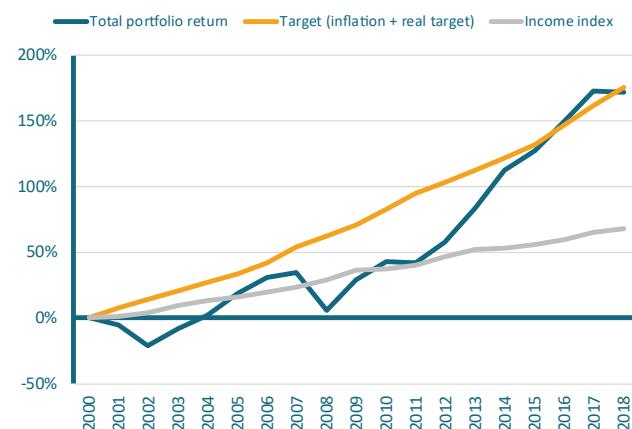
### Follow-up of real return target

The longest available time period now goes back to the start of the new pension system in 2001, that is, more than 18 years. Over this time horizon AP4's average annualised total return has been 5.7%, which is marginally lower than the long-term target of an average return of 5.8% per year (real return target indexed with inflation). Expressed in real terms, AP4's return has been 4.3%, and the long-term target has averaged 4.4% per year. However, the return has exceeded the income index's average growth of 2.9% per year by a comfortable margin, entailing that AP4 has contributed to the pension system's stability.

### Follow-up of active return target

The operative asset management's active return is evaluated in relation to the dynamic normal portfolio (DNP) set by the Board. Starting in 2018 the target is 1% per year measured on a moving basis over five years. This target is historically linked with previous excess return targets – in this case for the four years 2014–2017 – where the active asset management target has averaged 1.2% per year. AP4 has exceeded the active return target both for 2018 and over the five-year period.

### AP4's return, after costs, since start in 2001



### Active return target, before costs



# Market development 2018

**The world economy as a whole was strong in 2018, even though concerns over economic development increased towards the end of the year. Uncertainty surrounding the US Federal Reserve's expected interest rate hikes and worries over trade wars also contributed to the significant turbulence in the financial markets.**

## Global growth

Underlying economic growth was strong during the year, even though certain slowing tendencies became visible towards the end of the year, given that several economies had reached the top of the cycle at the start of the year. The US economy continued to develop very strongly, and unemployment fell to record-low levels. In Europe, too, growth was good, even though the slowing tendencies there grew stronger during the year. The Chinese economy continued to flatten in accordance with expectations at the same time that growth in Japan remained weak. Inflation rose in general from low levels, and it was actually only in the USA and a few emerging economies that interest rate hikes were carried out.

Concerns for growth grew stronger during the year. The risk for a global trade war became most tangible after the US raised tariffs against several major trade partners and threatened to impose additional tariffs. Naturally, Europe was negatively affected by this, but also by turbulence surrounding Brexit and Italy's budget fight with the EU.

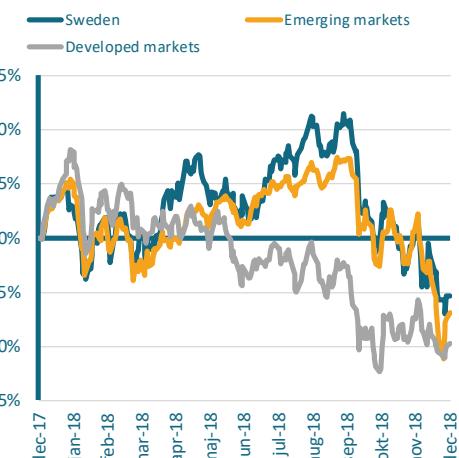
## The stock markets

The broad, global stock market index fell by -7.2%, expressed in local currency, after having started the year with a rapid rise and fall during the first quarter, to then rise slowly during the second

and third quarters. The fourth quarter was the most volatile, and stock prices fell sharply. The US market performed relatively better, but ended the year in red figures, while the stock markets in Sweden, Europe and emerging markets performed even more weakly.

Overall, company earnings developed well, especially in the USA. However, worries over the economy, interest rate increases and global trade gained the upper hand during the final quarter of the year and pushed market prices down.

## Stock markets (MSCI, local currency)

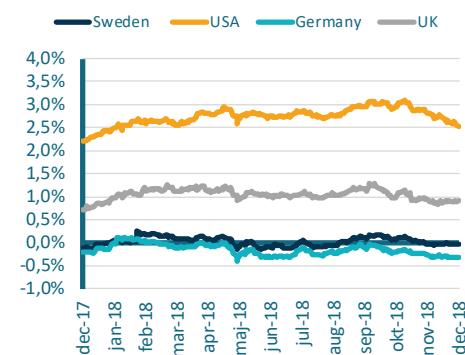


## Fixed income and currency markets

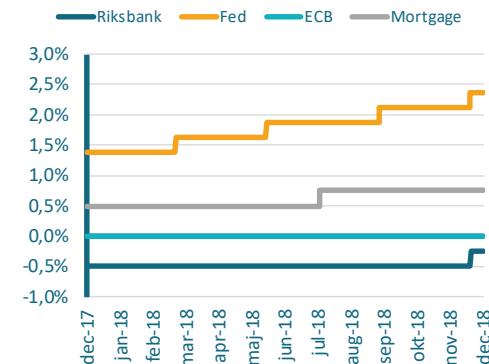
Market interest rates rose marginally from historically low levels, and the US dollar continued to strengthen against most currencies. A key underlying reason for the rising interest rates and the dollar's strength was that the Fed raised the federal funds rate no fewer than four times during the year, and uncertainty

Intelligence about continued interest rate hikes was a recurring source of concern in the financial markets. As expected, the ECB left its prime rate untouched and gradually scaled back its asset purchases and ended them at the end of the year.

### 5-year government bonds

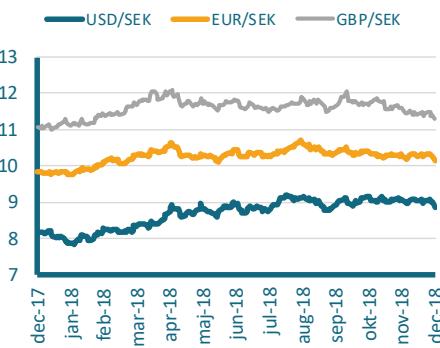


### Key interest rates



The Swedish krona weakened during the year, but received support when the Central Bank of Sweden raised its rate in December. The British pound fell sharply during the year against both the dollar and the euro due to mounting concerns over Brexit. In China, the key rate remained steady, and the currency fell against the dollar but was essentially unchanged against the euro.

### Swedish krona



### Future outlook

The global economy is expected to slow further during 2019. At the same time, increases in key interest rates are expected to continue, which may lead to continued uncertainty in the financial markets, especially considering that several of the risks that dominated the second half of 2018 remain unresolved. Continued volatile markets can therefore be expected, at least initially, even though AP4's basic view is that both the economic slowdown and risks will be manageable in a longer perspective.



AP4 takes its responsibility as an owner. During 2019 AP4 exercised its owner responsibility by voting at the Annual General Meetings of 90 Swedish and 971 foreign companies. Ahead of the 2019 AGM season, AP4 is participating on 32 Swedish nomination committees.



## Equity management

### "Our long-term perspective makes us an attractive owner."

#### Interview with Jannis Kitsakis

Senior Portfolio Manager in  
the Fundamental Equities  
unit.

Jannis has a degree in  
business administration  
with a background in  
equities trading and equities  
management.

Jannis has worked at AP4  
since 2008 and is responsible  
for management of AP4's  
equity portfolio of small and  
mid-cap Swedish companies.

#### **What is your role at AP4?**

I am responsible for management of AP4's internal equity portfolio of small and mid-cap companies. Focus is on the Swedish stock market, even though I selectively invest also in other Nordic countries. The equity portfolio is worth approximately SEK 12 billion, and I currently manage equities in some 70 companies.

#### **What kind of companies do you invest in?**

The portfolio consists of two parts – large core holdings and smaller, new holdings. Certain holdings are relatively significant in the portfolio, such as Beijer Ref, Biogaia, Lifco and Swedish Orphan Biovitrum. These are stable companies in which we have been owners for a longer time and have had good value performance. I also actively search for smaller companies in an earlier phase – preferably when they are headed for the stock market. For example, in 2018 I invested in Cellink, Q-linea and Xspray Pharma. Although these investments are small today in relation to the portfolio's size, they are examples of interesting, innovative companies where we have the opportunity to go in early and support them in the aim of generating a favourable return for AP4 in the long term.

#### **What are AP4's qualities for being successful as a shareholder?**

A significant competitive advantage is that we are very long-term in our investments, such as during a turbulent year like 2018. AP4 is never compelled to sell stocks in such situations, rather, such a situation represents an investment opportunity for me. Our long-term perspective also makes us an attractive owner for many companies, which opens doors for us. AP4 has been a significant shareholder in the Swedish market since 1974. We have a good network and good opportunities for dialogue with and insight into the companies we invest in. This, combined with the trend of brokerage firms cutting back on their equity analysis resources,

gives us an opportunity to create value in our company analyses.

#### **What are your thoughts regarding sustainability in asset management?**

We invest in well managed companies and can benefit from long-term structural trends. Examples of these are Vitrolife (which is driven by the IVF trend), probiotics companies (Biogaia, Probi, Infant Bacterial Therapeutics) and digitalisation (Addnode, Acando, Sectra). It is also important for us that the companies have good boards and good management. If the companies do not take sustainability risks into account, as a shareholder AP4 could be exposed to undesirable risks. Our long-term perspective goes hand-in-hand with sustainable companies in all aspects. We want to invest in companies that will be relevant also in the future.

We therefore take great responsibility as an owner. I personally am serving on 10 nomination committees ahead of the 2019 AGM season. AP4 is currently participating on the nomination committees of 32 companies, and two of my colleagues in the unit work exclusively with ownership issues in our portfolio companies, so this is very important for us in our value-creating work.

#### **2018 turned into a turbulent year in the stock markets?**

Yes. Following a market rise of +14% after the summer, stock prices fell sharply towards the end of the year, and small cap companies ended the year with a -2% return. Worries about the economy, political situation and trade wars stifled risk appetite considerably during the autumn. This also affected small and mid-cap companies, where many shareholders chose to sell their shares. As an active asset manager, my portfolio deviates considerably from the index, and I therefore succeeded in countering the decline and generated a favourable return of more than +8% for 2018.

# Lower anticipated return

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**AP4 believes that returns during the coming ten years will be considerably lower than what they have been historically. Since the start of the pension system in 2001 AP4's portfolio has generated an average annualised return of 5.7%, and 9.9% per year during the last ten years. After deducting for inflation, the annualised real return has been 4.3% since 2001 and 8.7% during the last ten years. For the coming ten years, the assessment is that AP4's dynamic normal portfolio (DNP), which is a benchmark portfolio made up of various market indexes, will generate a real annualised return of approximately 2%. Combined with the active asset management target of +1 percentage point, AP4's real return target as from 2018 is 3% per year.**

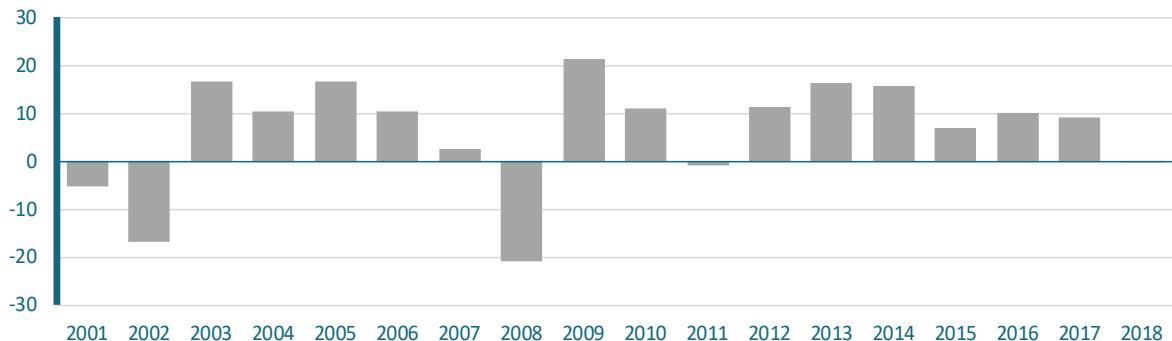
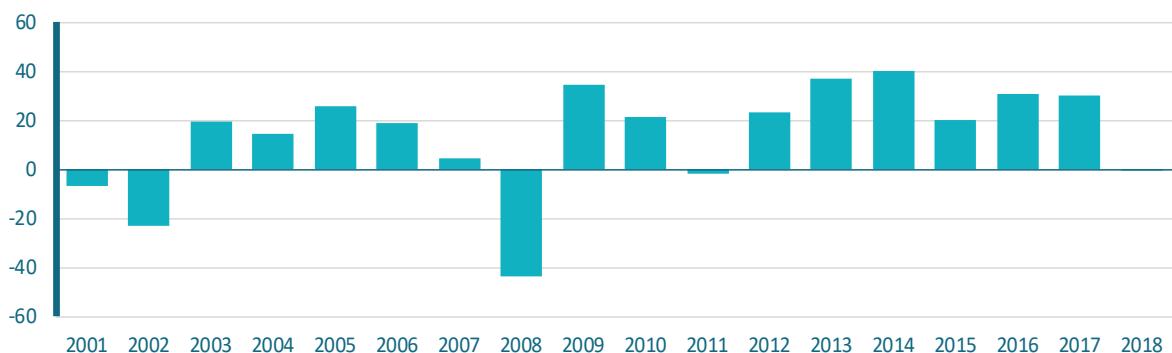
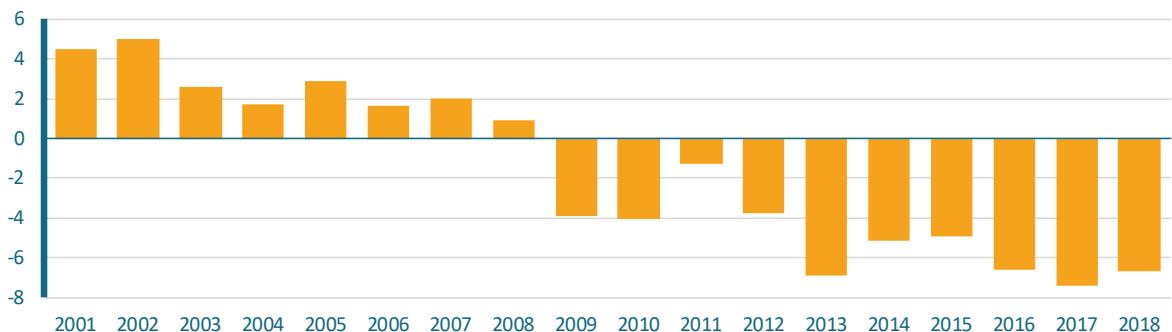
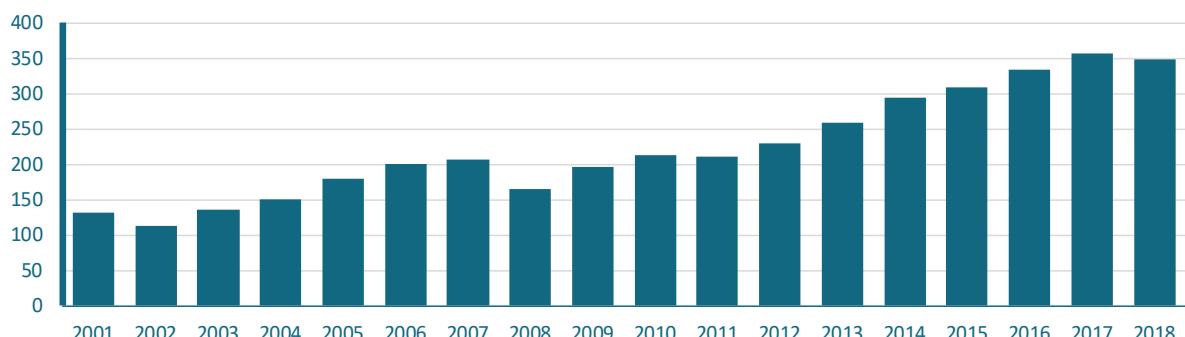
AP4 conducts a yearly review of its asset allocation to set the allocation which over a ten-year horizon is best suited to fulfil its mission in the pension system, given the anticipated market rate of return and risk. However, it must be noted that a forecast performance for the coming ten years is associated with major uncertainty. For this reason AP4 has chosen to work with scenarios – a base scenario and a number of alternative scenarios with various assumptions for growth, inflation, real interest rates and anticipated interest rate development. Based on these economic scenarios, return assumptions are developed for various asset classes, such as equities, fixed income securities and real assets. The goal is to create a portfolio that is both well-diversified and adapted to the base scenario, and which from a ten-year perspective also has satisfactory qualities in the alternative scenarios.

## A summary of the scenario analysis is:

- For its base scenario AP4 forecasts moderate growth and slightly rising interest rates during the coming ten years.
- All asset classes are relatively highly valued today.
- The anticipated real return for government bonds is negative.
- Being able to achieve the return target requires a high share of equities.
- Fixed income investments entail a risk reduction, but only limited portfolio protection due to very low interest rates.
- AP4's long-term mission and the higher anticipated return for equities compared with government bonds justifies a substantial equity allocation. This despite the relatively high equity valuations and the potential risks identified in the external operating environment.
- Significant exposure to Sweden in equities and fixed income investments is justified in part by anticipated higher returns relative to many other markets and in part by favourable opportunities for AP4 to achieve excess returns and lower currency hedging costs.

## AP4's performance since the start of the pension system in 2001

AP4's average annualised return after costs has been 5.7% since 2001. However, returns have varied significantly from year to year due to the substantial equity exposure that AP4 believes is necessary to achieve the return target. Since 2009 AP4 together with AP1-AP3 has made yearly disbursements to the pension system. These net payments from the AP Funds are mainly attributable to demographic factors such as the large number of people born during the 1940s who are now pensioners. It is expected that these outflows will now begin to decrease and return to close to zero or be positive by around 2040.

**Annual return after costs (%)<sup>1</sup>****Net result (SEK billion)<sup>1</sup>****Yearly net flows to the pension system (SEK billion)****Closing portfolio value (SEK billion)**

<sup>1</sup> The return and results for 2018 are so close to zero that it is not discernible in the chart

# Changed rules for the AP Funds

**The changed rules for the AP Funds took effect on 1 January 2019. The changes in the AP Funds Act were ratified by Swedish Parliament in November 2018 and entail greater flexibility regarding how the AP Funds may allocate their capital and a higher level of ambition with respect to sustainability in asset management activities. In a second step, the opportunity for the AP Funds to make direct investments in unlisted companies is now being studied.**

The changes that took effect on 1 January 2019 entail greater flexibility regarding how the AP Funds may allocate their capital. The minimum requirement for liquid fixed income assets with high credit ratings has been reduced from 30% to 20% of the portfolio value for the respective AP Funds. In addition, the maximum permissible share of illiquid assets in unlisted investments was raised from 5% of the portfolio value to 40%. Previously, there was no specific limitation regarding holdings of unlisted property companies. However, under the new rules, these holdings must now be included in the new limit for illiquid investments of a maximum of 40% of the portfolio. Finally, the requirement that a minimum of 10% of the portfolio must be outsourced for external asset management has been eliminated.

As a second step, opportunities for the AP Funds to make direct investments in shares in unlisted companies and credits are currently being studied. A bill and possible decision by Parliament are expected in 2019.

## AP4 welcomes more flexible investment rules and higher level of ambition regarding sustainability

AP4 welcomes the modernised investment rules, whose more relaxed allocation opportunities give the AP Funds better conditions to benefit from their unique, long-term investment horizon. The changes enable a portfolio structure that will lead to higher

anticipated returns and greater diversity in the portfolio.

AP4 believes it is also important that the more relaxed allocation opportunities are complemented by opportunities for direct investments in unlisted companies and credits. These opportunities would create conditions for long-term and more cost-efficient investments in unlisted assets. The ability to complement fund investments with direct investments is also in line with prevailing market trends and practice.

AP4 also welcomes the fact that it has now been codified into law that the AP Funds are to manage the fund assets in an exemplary manner through responsible investments and responsible ownership, and that the AP Funds shall attach importance to sustainable development without compromising on the overarching goal of achieving a high return. AP4 is of the opinion that a sustainability perspective is a precondition for successful long-term asset management. A more detailed description of exemplary asset management is provided on page 22.

## Changed rules allow greater flexibility in asset allocation

2001-2018	2019-
Unlisted maximum 5% Unlisted property companies <b>External management min. 10%</b> Other listed assets Liquid and fixed income w high credit ratings min. 30%	Illiquid investments incl. Unlisted property companies max. 40% Unlisted property companies Other listed assets <b>Minimum 20%</b>



Greater opportunities for investments in unlisted companies

## "AP4 has very good conditions to be a long-term and responsible owner of unlisted companies."

### **Interview with Jenny Askfelt Ruud**

Head of Alternative Investments

Jenny (M. Sc. Finance & Economics) has a long background of experience with investments in unlisted companies and in driving sustainability issues as an owner. She has worked in these areas from various perspectives, including investment banking, strategic consulting and investment companies/private equity.

Jenny joined AP4 in 2018 as Head of the Alternative Investments unit.

#### **You are relatively new at AP4 – explain your role.**

I assumed my position as Head of Alternative Investments at AP4 in September 2018. The Alternative Investments unit is responsible for investments in unlisted companies and illiquid assets, such as in unlisted property companies, private equity funds and illiquid credits. Due to the previously restrictive rules, AP4's asset allocation in unlisted investments – apart from our investments in property companies – has previously been relatively small. With the new rules in place I and my new colleagues are looking forward to developing AP4's strategy and position in alternative investments and working further with integrating sustainability in our investment process.

#### **How will the new rules affect how you invest?**

We now have the opportunity to increase our allocation of investments in unlisted companies. To really be able to benefit from this opportunity and make long-term and cost-efficient investments in unlisted companies, it is very good that our opportunities to make direct investments in unlisted equities and credits are now being studied. Our allocation to investments in unlisted companies and how the portfolio is built up going forward will depend on the outcome of this process.

#### **Can you give a few concrete examples of investments you would like to make?**

The AP Funds' mission is long-term, and they have good conditions for being very long-term and responsible direct owners of unlisted assets. In the same way that we today can invest in unlisted property companies such as Vasakronan

and Riksheim, in the future we would also like to be able to make corresponding investments in infrastructure companies. AP4 has very good conditions to be a long-term and responsible owner in these types of companies.

We would like to be able to make investments in unlisted companies and in credit portfolios together with other long-term owners. Investing only in funds like today is expensive. And given AP4's very long-term perspective, it is also rather short-sighted and not in line standard market practice, where internationally it is common that pension funds are long-term direct owners in unlisted businesses.

#### **How does your unit contribute to AP4's Climate & Environment focus area?**

I am passionate about long-term sustainable investments, and today we are working actively to identify investments where we can contribute and benefit from the current transition to a low-carbon economy. Several of these investments are in relatively early unlisted phases and are in need of expansion capital. Here, too, I see greater opportunities to make such investments if step two of the investment rules for direct investments in unlisted companies is implemented.

In general I want AP4 to be a driver in the integration of sustainability in alternative investments by pushing asset managers and investment teams to include the sustainability transition to a greater degree in their investment strategies, processes and owner agendas – to drive development of the managers' internal sustainability work especially with respect to diversity and business ethics, and to make dedicated investments in funds and assets that are driving the transition to a sustainable society.

# Sustainability report

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**AP4 believes that a sustainability perspective is a pre-requisite for long-term successful asset management. It is for this reason the AP4 integrates sustainability, with focus on climate & the environment and corporate governance, in its investment operations. At the start of 2019 new rules for the AP Funds were implemented that require exemplary management, entailing a higher level of ambition for sustainability. AP4 strives for transparency with respect to sustainability and therefore supports and reports in accordance with several international standards, such as GRI, PRI and TCFD.**

## The UN's Global Goals are part of AP4's framework

The UN's Sustainable Development Goals (SDGs) are important, as they are aimed at stimulating investments that can contribute to solutions to major global problems. Through its sustainability work and its investments, AP4 can contribute in various ways to the achievement of the UN's Sustainable Development Goals. AP4 focuses on the goals that have a clear financial coupling and that can be used as a basis for investments. Examples of this are shown on page 19. AP4 works continuously to integrate sustainability in its asset management, and the UN's Global SDGs make up part of the framework of AP4's sustainability policy for its asset management.



## Two focus areas – Climate & Environment and Corporate Governance

AP4 works with two focus areas for its investments – Climate & Environment and Corporate Governance. AP4's work in these two areas supports the SDGs in various ways. The Climate & Environment focus area is described in more detail in the climate reporting section on pages 24-29. AP4's work on taking responsibility as an owner through the Corporate Governance focus area is described on pages 30-31.



## AP4 participated at the G20 Summit's Investor Forum

AP4's CEO was one of approximately 30 representatives of international investors invited to participate at the 2018 G20 Summit in Buenos Aires. It was the first time that the G20 held such an Investor Forum between heads of state, finance ministers and international investors in connection with a G20 Summit. The aim of the Investor Forum was to identify concrete steps for boosting long-term, sustainable investments. AP4 embraces the long-term dialogue between political decision-makers and international investors aimed at ensuring achievement of the UN's Global Goals.



# The UN's Sustainable Development Goals

AP4 has numerous investments that support the UN's Sustainable Development Goals (SDGs), mainly in the Climate & Environment focus area. Through shareholder initiatives and work in trade organisations, AP4 serves as a responsible owner and contributes to the Global Goals.

## **SDG 3. Good health and well-being**

AP4 does not invest in companies active in tobacco or cannabis.

## **SDG 5. Gender equality**

AP4 has long worked in a structured manner as an owner and in nomination processes for greater diversity and gender equality on company boards. This is an expressly stated objective in AP4's Corporate Governance focus area. AP4 has also invested in a fund with gender equality as a specific sustainability area.

## **SDG 8. Decent work and economic growth**

AP4 participates in international owner initiatives and engages companies in dialogues – through the Council on Ethics of the AP Funds, among other contexts – to promote decent working conditions, protect workers' rights and promote a safe and secure work environment, and combat forced labour, child labour, modern slavery and trafficking.

## **SDG 11. Sustainable cities and communities**

AP4's unlisted property companies work with sustainability, and most are evaluated against the Global Real Estate Sustainability Benchmark (GRESB), which analyses sustainability in the real estate sector globally. These companies have good scores from GRESB for their sustainability work. For example, AP4 owns 25% of Vasakronan, Sweden's largest property company, which has long worked with sustainability in its operations and has earned the highest Green Star rating from the GRESB.

## **SDG 13. Climate action**

AP4 has worked for many years to reduce the climate risk in its assets, among other things by being a pioneer in investing according to low-carbon strategies. Nor does AP4 invest in companies that derive a significant share of their sales from thermal coal or oil sand. During 2014 AP4 was one of four co-founders of the Portfolio Decarbonization Coalition (PDC) together with the UN and others, whose aim is to encourage investors around the world to invest more sustainably. AP4 is also active in owner initiatives that support the UN's Sustainable Development Goals. These include initiatives urging companies to refrain from negative climate lobbying, initiatives advocating for stock markets around the world to apply sustainability reporting guidelines, initiatives demanding that oil companies work to reduce the negative environmental impacts of their operations, and initiatives focusing on gender equality and human rights.

## Changed rules for exemplary asset management entail higher level of ambition in sustainability

On 1 January 2019, new rules for sustainable asset management took effect for the AP Funds. This follows a change in the wording of the AP Funds Act which specifically stipulates that asset management shall be conducted in an exemplary manner through responsible investments and responsible ownership. The goal of exemplary asset management shall be achieved without the AP Funds compromising on the overall goal of achieving a long-term high return. The new rules chart out a higher level of ambition in sustainability for AP4. A detailed description of the changed rules and how AP4 acts in an exemplary manner is provided on page 22.



Council on Ethics  
Swedish National Pension Funds

## The AP Funds collaborate through the Council on Ethics

The Council on Ethics of the Swedish National Pension Funds is a collaboration between the First, Second, Third and Fourth AP Funds with the mission to encourage foreign companies to make improvements in the area of sustainability. The Council on Ethics works to influence companies around the world to give consideration to ethics, the environment and sustainability issues of major importance for people and communities as well as for the companies' own value creation. The Council on Ethics' continuing work involves preventive and reactive dialogues with foreign companies – some 300 dialogues per year – as well as industry projects, international collaborations and owner initiatives. The company dialogues revolve around how the companies address difficult issues in their operations, including corruption, human rights, worker rights, health and safety, pollution and biodiversity. The Council on Ethics conducts preventive projects in the areas of human rights and anti-corruption, among others. The Council on Ethics reports its work and positions in an annual report as well as on a regular basis on its website.

## Dialogue is the starting point

AP4's starting point is to take its responsibility as a long-term owner. In cases of confirmed company-specific violations of international conventions, AP4 cooperates together with AP1-AP3 through the Council on Ethics. The Council on Ethics engages such companies in a dialogue in an effort to bring about a long-term improvement. If it is determined that such a dialogue is not having an effect, the Council on Ethics can recommend that the AP Funds not invest in the company in question. In addition, AP4 makes assessments of certain sectors and companies in relation to international conventions and can decide to not invest in certain sectors or companies based on these assessments.





AP4 works with two focus areas in its investments - Climate & Environment and Corporate Governance.

# Change in law conveys higher level of ambition in sustainability

**AP4 welcomes the fact that sustainability has been added to the wording of the AP Funds Act with the clarification that asset management shall be conducted in an exemplary manner through responsible investments and responsible ownership. AP4 has a long record of experience in working with sustainability issues in its asset management and is today at the forefront internationally. Among other distinctions, in 2018 AP4 was named as the world's leading pensions fund in the climate area by the Asset Owners Disclosure Project (AODP). AP4 believes that a sustainability perspective is a prerequisite for successful asset management. By taking responsibility as an owner and reducing climate risks in the portfolio, AP4 can contribute to higher long-term sustainable returns.**

On 1 January 2019 new rules went into effect for the AP Funds concerning sustainable asset management. The new rules convey a higher level of ambition regarding sustainability, whereby the wording of the AP Funds Act was changed to stipulate that asset management shall be conducted in an exemplary manner through responsible investments and responsible ownership. The goal of exemplary asset management is to be achieved without the AP Funds compromising on the overall goal of generating a long-term high return.

In the asset management activities, special emphasis is to be placed on how sustainable development can be promoted without compromising on the overarching goals for risk and returns. The AP Funds are to collaborate in achieving the goal of exemplary asset management. This collaboration shall, as a minimum, result in the AP Funds drawing up:

- ① A shared values foundation for management of the Funds' asset,
- ② Joint guidelines for how the goal is to be achieved,
- ③ Joint guidelines for which assets the Funds' assets should not be invested in.

During 2018 the AP Funds made preparations ahead of the change in the law and drew up a values foundation and guidelines for collaboration in the area of sustainability. These documents are available on the AP Funds' respective websites.

In connection with rule changes, AP4 stepped up its sustainability ambitions, and ahead of 2019 AP4 carried out further divestments in the portfolio of holdings in companies active in nuclear weapons and oil sand.

Since previously AP4 has opted to not invest in companies involved in the production of tobacco, cannabis, mines or cluster munitions, or in companies in which thermal coal accounts for more than 20% of sales.

## Application of exclusions

Based on internal assessments or recommendations from the Council on Ethics of the AP Funds, AP4's CEO decides on which assets AP4 will not invest in.

For directly owned holdings, AP4 has uninhibited opportunities to affect the portfolio. In such cases an instruction is issued to the responsible asset managers to not include these assets in the portfolio.

In cases where AP4 has investments in actively managed securities funds or derivatives, AP4 conducts a structured evaluation of the fund manager's process for sustainability, obtains an assurance from the manager to include such assets only in exceptional cases, follows up underlying holdings, and notifies fund managers that holdings of excluded companies may constitute grounds for discontinuing the fund management assignment.

# AP4 does not invest in:



## Nuclear weapons

Nuclear weapons are weapons of mass destruction, and their use would bear a heavy toll on civilians. Corresponding biological and chemical weapons are addressed and banned by UN conventions. Nuclear weapons are covered by the Non-Proliferation Treaty, which permits five states to have nuclear weapons. However, under the treaty these states have committed themselves to reducing and, over the long term, eliminating their own nuclear weapons. Currently, modernisations and upgrades are being made to nuclear weapons programmes. AP4 is of the opinion that these modernisations and upgrades go against the spirit of the Non-Proliferation Treaty. AP4 therefore decided in 2018 to not invest in companies involved in this area.



## Tobacco and cannabis

In 2016 AP4 decided to not invest in tobacco companies, based on the determination that mounting regulations would negatively impact tobacco companies' future stock market valuations. In addition, AP4 believes that an exemplary interpretation of the WHO Framework Convention on Tobacco Control, which seeks to steadily and sharply reduce tobacco consumption, supports AP4's decision to not have ownership in tobacco companies. The Council on Ethics of the AP Funds has recommended that the AP Funds exclude companies active in cannabis as a pleasure drug or for religious purposes based on the UN's conventions on narcotic preparations. Companies that produce cannabis for medical or scientific purposes are not covered by the exclusion. This decision was made in 2018.



## Thermal coal and oil sand

AP4 does not invest in companies for which thermal coal or oil sand account for more than 20% of sales. Thermal coal and oil sand are fossil energy sources with high CO<sub>2</sub> intensity per energy unit, and AP4 believes that these must be phased out in a global transition to a low-fossil society in line with the UN's Climate Convention and the Paris Agreement. AP4 therefore divested its holdings in these companies in 2018. On top of this, AP4 applies low-carbon strategies for global equities, entailing the AP4 is reducing its exposure to the companies in each sector that have high CO<sub>2</sub> intensity or fossil fuel reserves.



## Cluster munitions and mines

The Mine Ban Treaty and the Convention on Cluster Munitions stipulate that states that have signed and ratified these treaties shall cease to produce, conduct trade in and use anti-personnel mines and cluster bombs. The Council on Ethics of the AP Funds has recommended that the four AP Funds divest companies that manufacture anti-personnel mines or cluster bombs, and AP4 therefore has not had ownership in any such companies since 2008.



## Company-specific exclusions

AP4 has been collaborating with AP1-AP3 through the Council on Ethics of the AP Funds since 2007. In the event of confirmed violations of international conventions, the Council on Ethics may choose to engage individual companies in a dialogue to bring about a change. If such a dialogue proves to be unfruitful, the Council on Ethics recommends that the AP Funds exclude such companies from their investment portfolios. AP4 has chosen to exclude companies based on recommendations from the Council on Ethics due to violations of conventions on health and safety, negative environmental impact, labour law, corruption and operations in occupied areas.

# Focus area: Climate & Environment

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**Climate change is one of the greatest challenges of our time, affecting essentially all states, sectors and companies. Climate change will have a growing impact on asset values and the opportunity to generate returns over the long term. The world's ability to curb climate change is therefore a precondition for stable future economic growth and thus for AP4's ability to fulfil its mission over time.**

## AP4 supports TCFD

AP4 believes that transparent reporting of climate-related risks and opportunities contributes to a faster transition to a low fossil fuel society. A rapid transition is necessary to minimise climate-related risks and negative impacts on the ecosystem, societies and economies. AP4 supports climate reporting in accordance with the Task Force on Climate-related Financial Disclosures (TCFD), both for investors and for portfolio companies. AP4's climate reporting therefore adheres to the TCFD's recommendations with respect to four thematic areas: Governance, Strategy, Risk Management, and Metrics and Targets.

## Governance

AP4's operations are governed by the AP Funds Act. In this act and its drafting work it is stipulated that asset management shall be conducted in an exemplary manner through responsible investments and responsible ownership, and that particular emphasis shall be given to how sustainable development can be promoted without compromising on the overarching risk and return targets.

AP4's board of directors has adopted a Sustainability Policy that describes the work on integrating sustainability in asset management, where Climate & Environment is one of AP4's two focus areas.

Sustainability is a so-called key investment belief in AP4's investment philosophy. During 2018 the Board addressed sustainability and the climate issue at five of the year's six board meetings. The sixth meeting was focused exclusively on adopting AP4's half-year report. The Board has assigned the CEO with the task of continuously assessing and addressing climate-related issues in the asset management. The CEO, the heads of the respective asset management units and the head of Strategy & Sustainability are responsible for ensuring that sustainability is integrated in all of AP4's investment processes.

## Strategy

AP4 has a very long-term investment mandate and works with time horizons of up to 40 years in its asset management. Over these time horizons, climate change is considered to be a significant risk factor. AP4 therefore integrates sustainability broadly in its asset management and works with Climate & Environment as a special focus area. The work with climate scenario analysis is reported in detail on pages 28-29.

## AP4's fundamental principles for implementation of Climate & Environment are:

- Broad implementation of risk-mitigation strategies in AP4's portfolio. AP4 applies low-carbon strategies in global equities, entailing that AP4 reduces its exposure to the companies in each sector that have high CO<sub>2</sub> intensity or fossil fuel reserves. This reduces the CO<sub>2</sub> intensity in AP4's portfolio and thus its exposure to climate-related transition risks.
- Dedicated allocation to investments that benefit from or play a leading role in prioritised areas. AP4 searches actively and has made a number of investments focused on contributing to or benefiting from the shift to a low-carbon economy that is currently taking place.



## Goals for following up integration of sustainability and the Climate & Environment focus area

**Integrating sustainability aspects associated with the climate and environment in asset management has high priority. AP4 has a number of overarching goals for this work.**

AP4 shall:

**1 Increase the share of investments that lower climate risk in the asset portfolio**

During the year, the share of investments that lower climate risk in the asset portfolio increased to 32% of AP4's global equity investments. In addition, during 2018 AP4 sold companies with significant operations in thermal coal and oil sand.

**2 Map out quantitative and qualitative indicators for Climate & Environment in AP4's assets**

Work continuously to map out complementary indicators for Climate & Environment — both quantitative and qualitative — which can be used in asset management. More indicators for climate risk are necessary as a complement to measuring carbon footprint, which shows only part of the exposure to climate risk in the asset portfolio.

**3 Measure and disclose AP4's carbon footprint**

Reporting the carbon footprint of listed equities is one way of illustrating climate risk. AP4's yearly carbon footprint for holdings of listed shares is presented in a table on page 27.

**4 Scenario analysis of climate-related risks and opportunities for AP4's assets**

Work in this area continued in 2018 and culminated in an analysis of current research findings and a study of thematic investment areas in sustainability. A climate scenario analysis report is provided on pages 28-29.

**5 Help make the green bond asset class attractive and grow**

AP4 shall contribute capital in new issues and create a liquid secondary market for green bonds when they meet AP4's criteria for sustainability and profitability. During 2018 AP4 invested in a new fund focusing on green bonds issued by banks in emerging markets. At year-end AP4 owned green bonds with a market value of SEK 2.6 billion (4.2).

**6 Spread knowledge about sustainability**

The asset management organisation allocates time to share its knowledge and experience about low-carbon strategies and green bonds with other institutional investors. During the year AP4 participated at a number of conferences focusing on climate change. Among other things, AP4's CEO participated in the G20 Summit's Investor Forum during the year.

AP4 uses a breadth of methods adapted to various asset management strategies, investment mandates, and strategies and opportunities for exerting influence. For global equities, AP4 uses negative and positive screening in the form of low-carbon strategies.

These strategies reduce exposure to companies with the relatively largest CO<sub>2</sub> emissions and fossil fuel reserves. AP4 engages companies in dialogues about material sustainability issues based on their respective sectors and geographical presence, when deemed relevant. When selecting external fund managers – regardless of their focus – the manager's competence and methods for including sustainability aspects into fund management are assessed. Fund managers' work on integrating sustainability aspects in their management is followed up on a regular basis by AP4.

AP4 believes that good information and qualitative basic data and standardised reporting are prerequisites and a challenge for its ability to develop climate-related investment strategies. Evaluation of providers of climate-related data, among others, is conducted on a regular basis.

## Risk management

AP4 has determined climate risks to be financial risks to the utmost degree and believes they should be included and assessed in the same way as other financial risks. In the shift to a low-fossil society, AP4 believes among other things that greenhouse gas (GHG) emissions will lead to rising costs for companies. Companies with large GHG emissions and/or fossil fuel reserves will be negatively affected and will be valued and priced differently than they are today. Climate risks therefore lend themselves to being included in financial investment assessments with long-term investment horizons. As early as 2011, AP4 identified climate change as one of the largest long-term risks for AP4's mission and asset portfolio.

Since 2012, AP4 therefore invests with a view to reduce climate risk in its assets. Today a global platform is used for investments in low-carbon strategies. These investments mitigate climate risk in AP4's assets by reducing exposure to companies with the relatively largest CO<sub>2</sub> emissions and fossil fuel reserves. These investments are made under restricted risk-taking with a maintained expected return relative to benchmark indexes. AP4 has gradually increased its share of investments according to low-carbon strategies.

AP4 is working continuously on further developing strategies to reduce the carbon footprint of its investments. During 2018 AP4 conducted specific analyses, which have led to AP4 divesting assets in fossil-based energy sources with high CO<sub>2</sub> intensity, such as thermal coal and oil sand.

The goal is also to broaden its strategies to also include resource efficiency in a broader perspective on top of carbon footprint. AP4 believes that it is important to be an active and responsible owner that influences companies to increase their awareness about and transparency in reporting climate-related risks.

## AP4 influences as an owner

In 2018 AP4 exercised its voting rights at the Annual General Meetings of 1,061 companies from 19 countries. At these AGMs, 52 of a total of 372 shareholder proposals were related to the climate or renewable energy. During the past year AP4 voted in favour of shareholder proposals calling for greater transparency surrounding climate reporting and influence on the operations of companies involved in fossil energy.

AP4 supports the Principles for Responsible Investments (PRI) and the Institutional Investor Group on Climate Change (IIGCC), among other organisations. Initiatives focusing on climate change that AP4 supports include the Montreal Pledge and Climate Action 100+, an initiative directed at the 100 companies with the largest CO<sub>2</sub> emissions, where AP4 has engaged three companies in a dialogue: Daimler, Engie and Volkswagen.

## Metrics and targets

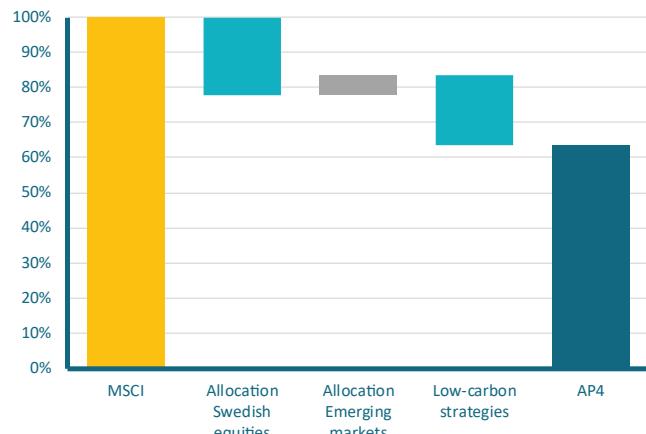
AP4 measures and publishes its carbon footprint, and together with other AP Funds has standardised how the AP Funds conduct their carbon footprint reporting. AP4 uses climate-related metrics for its low-carbon investments, which contribute to reductions in the assets' climate risk. Having access to qualitative basic data is a challenge and precondition for being able to evaluate climate-smart strategies. AP4 uses both externally published targets and internal targets for steering and following up the integration of sustainability in the asset management operations within the Climate & Environment focus area.

## AP4 is reducing climate risk in the portfolio

AP4 aims to increase the share of investments that reduce the climate risk in its portfolio. AP4's carbon footprint today is approximately 63% of that for a broad, global equity portfolio. This is done by adhering to low-carbon strategies in the equity portfolio, through which AP4 – for each sector – is reducing its exposure to companies with high CO<sub>2</sub> emissions or fossil fuel reserves. Nor does AP4 have ownership in companies with significant operations in thermal coal or oil sand. This reduces its exposure to CO<sub>2</sub> emissions and thereby reduces the portfolio's risk profile. Further, AP4's substantial allocation to Swedish equities contributes to lower carbon exposure. This is partly countered by that fact that AP4 also has significant exposure to shares in emerging markets, which generally have a higher CO<sub>2</sub> intensity than those in developed markets.

Absolute CO2 footprint and certain measures of CO2 intensity were higher at year-end 2018 than at the start of the year. The increase is due in part to the fact that AP4 increased its allocation to emerging markets during the year, which generally have higher CO2 intensity than developed markets. In addition, the weak performance of the world's stock markets during the year entailed that CO2 intensity measured as companies' CO2 footprint in relation to their market cap increased. However, the metric that AP4 applies in its portfolio structure – a mathematical average of CO2 intensity where the absolute carbon footprint is measured in relation to the companies' revenues – continued to decrease during the year.

### Contribution to CO2 reduction



### Carbon footprint of the listed equity portfolio

Carbon dioxide indicators	2018	2017	2016	2015	2014	2013
Absolute carbon footprint, corresponding to owned share of companies' total emissions (million tCO2e) <sup>1</sup>	2.42	2.35	2.60	2.45	2.80	3.28
Carbon dioxide intensity, where owned share of absolute carbon footprint is measured in relation to ownership share of companies' market caps, <sup>2</sup> (tCO2e/SEK m) <sup>1</sup>	13.3	11.5	14.5	14.0	16.2	23.1
Carbon dioxide intensity, where absolute carbon footprint is measured in relation to companies' revenues, harmonious average, (tCO2e/SEK m) <sup>1</sup>	15.9	13.5	17.6	22.2		
Carbon dioxide intensity, where average carbon footprint is measured in relation to companies' revenues, mathematical average, (tCO2e/SEK m) <sup>1</sup>	14.3	15.3				
Identified market value as share of total fund capital, % <sup>1</sup>	50.0	56.5	55.7	56.4		
Identified market value as share of total equities, % <sup>1</sup>	95.4	97.2	95.5	99.8		

<sup>1</sup> Key ratio is calculated for the assets in the balance sheet item Shares and participations, listed. Equity exposure via funds may be included to the extent that information is available about the funds' underlying holdings.

<sup>2</sup> Market value of listed equity portfolios.

# Climate scenario analysis

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**AP4 worked actively with climate scenario analyses in 2018. The analysis comprises three steps, beginning with an overall analysis of current research findings about the effects of climate change on growth and inflation. This forms the basis of a fundamental analysis of the potential financial effects of climate-related risks and opportunities on holdings in AP4's portfolio. In a third step, a quantitative analysis of the effects on AP4's portfolio will be conducted in 2019 based on the conclusions of the fundamental analysis.**

AP4's climate scenario analysis does not set various scenarios against each other, but instead focuses on the dynamics of the climate transition based on the current situation. The starting point is to achieve the goals of the Paris Agreement, but also to analyse the effects of lower and higher ambitions.

AP4's conclusion of the research findings is that there is a negative correlation between climate change and growth, particularly for specific sectors and geographies. However, the causal relations are so numerous and uncertain that it is hard to say anything more specific about the growth and return potential or to use the insights for concrete reallocations in the portfolio.

The fundamental climate analysis of the effect on the portfolio picks up where the analysis of the research findings ends and focuses on transitional risks as well as physical risks from various time perspectives. The analysis is based on the level of ambition set in the Paris Agreement and on the assumption that global warming is minimised to less than 2 degrees Celsius as a basic scenario (IPCC RCP 2.6). This, in turn, is in line with the IEA's Sustainable Development Scenario (SDS), which shows that CO<sub>2</sub> emissions must be cut in half by 2050 through a comparatively aggressive transition.

**AP4's analysis leads to the following, overarching long-term conclusions:**

- The earlier and more impactful the transition takes place, the smaller the physical risks will be, and vice versa. In the base scenario, a rapid cut in emissions by half would take place by 2050, and companies would be affected relatively more by the climate transition in itself and its effect on the companies' business models than by higher, physical climate risks, even though they would also be expected to take place later.
- The direction is relatively clear, even though the strength and time horizon for the transition are hard to estimate.
- Given that the transition risks are greater than the physical risks in the Fund's basic scenario, the analysis is focused on the dynamics of the transition and its effect on companies, even though the physical climate risks are not negligible.
- The risks affect most sectors and regions, but asymmetrically. Certain sectors and regions are particularly exposed at the same time that the level of vulnerability varies.
- The longer an intensification of measures waits, the greater the transition will be at the same time that the physical risks will increase. This means that the level of volatility may not only be higher during a limited period, but that it will also structurally end up at a higher level.



## Climate scenario analysis

**"Climate risk and the climate transition will have a significant effect on AP4's portfolio in the long run, with respect to both risks and opportunities."**

### Interview with Marcus Svedberg

Investment Strategist

Marcus is an economist and political scientist with experience in economic analysis and sustainability issues both in Sweden and internationally.

Marcus was recruited to AP4 in 2018.

#### Why is it important to conduct climate scenario analyses?

We are currently in the midst of a transition to a low-fossil global economy, and this will have a significant impact on economic growth going forward. As an investment strategist I work across a broad front on assessing trends and how these will affect AP4's portfolio. Climate risk and the climate transition will have a significant impact on AP4's portfolio over the long term, both concerning risks and opportunities.

#### How fast will this transition take place?

The transition will be significant during the next ten years regardless of whether the national commitments from Paris to reduce carbon emissions are made stronger or not, but naturally the intensity of the transition will increase if and when this takes place. There is therefore no reason to wait for any additional strengthening. There is a risk of the commitments decreasing, but we believe this risk is low. However, the risk for uneven or weak implementation of the commitments, or of individual countries leaving the Paris Agreement, is very real and something that should be taken into account.

#### What assets will be affected and how?

We believe that fossil assets and the value chains that deliver into fossil energy production will be affected first and foremost. But the transition will also entail extensive shifts in value within sectors such as mobility and transport, agriculture and food, and construction and real estate. In general, companies that are better equipped for climate change have a better risk profile.

The risks of being late in the transition are assumed to outweigh the risks of being too early. The upside for fossil assets is limited by the

emergence of renewables (which are gradually being supported increasingly by technology, policies and reputation) at the same time that the downside is great as assets could become stranded. Short-term market movements, such as changes in oil prices, can hit in both directions, but it is believed that fossil assets will be revalued over time given the strong focus on sustainability and fact that investors are increasingly choosing to exclude fossil assets.

#### What is AP4 doing with its portfolio?

AP4's low-carbon strategies in the global equity portfolio have resulted in a portfolio that has comparatively low and steadily decreasing exposure to fossil assets. It's largely a matter of reducing AP4's exposure to carbon emissions and thereby reducing portfolio risk. These low-carbon strategies are being constantly refined.

During 2018 we also worked at identifying a number of sustainable investment themes in order to be able to also establish proactive exposure to businesses that contribute to and benefit from a sustainable transition. We have identified three areas – the energy shift/mobility, resource efficiency and renewables – where we believe that the likelihood for a transition is significant at the same time that there are investment opportunities that are sufficiently mature and large for AP4 to be able to invest substantial capital and which offers an attractive return.

# Focus area: Corporate Governance

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**Being an active, responsible owner through its asset management is one of AP4's sustainability focus areas. Corporate governance is an expressed part of AP4's strategy for enhancing its returns. The goal is for companies to be managed sustainably, responsibly and as efficiently as possible. This creates conditions for them to be successful and deliver long-term sustainable returns, which in turn contributes to stable pensions.**

## Responsible owner

AP4 believes that direct dialogue with company boards, management and other owners often works best. In order for dialogues to work and be successful, they are conducted in confidence between the parties.

### AP4's work with corporate governance aims to:

- Contribute to favourable, long-term sustainable returns
- Safeguard the best interests both of shareholders and individual companies
- Take into account the unique circumstances and needs of each individual company
- Exercise the rights and obligations of AP4's ownership role responsibly and with a long-term perspective
- Promote development of generally accepted practice in the securities markets. Well-functioning stock markets are essential for long-term investors to be able to generate high and long-term sustainable returns

## Directive on greater shareholder involvement

During the spring the "Directive for greater shareholder involvement" was presented to adapt Swedish law to the new rules in the European Parliament that encourage long-term shareholder involvement. Much of what has been proposed is already in place in Sweden, mainly through the Swedish Companies Act and the Swedish Corporate Governance Code (the Code). However, two

proposals were set forth that AP4 believes work against greater shareholder involvement. The first, lowering the decision making requirement according to the so-called Leo rules<sup>1</sup> from a nine-tenths majority to a two-thirds majority, would have a negative effect, in AP4's opinion. In certain cases it could allow large owners to set forth proposals and make decisions that are counter to minority shareholders' interests. Such a situation could erode trust in the Swedish stock market. The second proposal limits the opportunities for smaller shareholders to submit proposals at general meetings – something that can hardly be said to be in line with stimulating greater shareholder involvement. AP4 has – like several other review parties – recommended that these two proposals are not be implemented.

## Greater diversity in boards

Every company board is formed according to the company's specific situation to create the best conditions for value creation. The number of directors, the directors' competence, age, gender, independence and time for being able to fulfil their assignment are factors that must be taken into account based on the individual company's situation. AP4 has worked actively for a number of years to help bring about a more even gender balance in company boards. For many years AP4 has therefore advocated for ensuring that at least one woman is on the short list of nominations for new board members. This position has had good results and has in many cases contributed to a higher share of women on the company boards for which AP4 has participated on the nomination committee. In 2018, 39.4% of new board members were women, compared with 36.2% for the stock exchange as a whole. For boards of companies listed on the Stockholm Stock Exchange in total, 122 women were elected as new directors on the boards of companies in which changes were made. Since many of the newly elected women replaced men, the share of women on the boards of listed companies rose by 1.4 percentage points to 34.9%.

<sup>1</sup> The so-called Leo rules pertain to resolutions at general meetings of shareholders regarding issues, share transfers and loans to members of company management, employees and other related parties.



## Corporate governance goals

**AP4 adheres to the following principles in its corporate governance:**

### 1 Participate on nomination committees

AP4 participated on 33 nomination committees in 2018, and in January 2019 was participating on 32 nomination committees ahead of the 2019 AGM season. The Swedish ownership model creates a good balance between shareholders and company managements and is regarded as an international model.

### 2 Interview all or certain board members in connection with board evaluations

In a nomination committee's evaluation of a board, AP4 advocates that the nomination committee conducts its own interviews to gain a deeper understanding of how well the board is working. This is an important complement to any written, self-assessments that the board may have commissioned or to an external board evaluation.

### 3 Advocate for greater diversity among board members, especially in terms of gender balance

On the nomination committees that AP4 participates on, at least one woman should be on the short list of nominations for new board members, and the nomination committee shall strive to ensure that the Swedish Corporate Governance Code's recommendations on the proportion of women are met.

On the nomination committees for 2018 AGMs on which AP4 participated, 13 newly elected board members were women, or 39.4%.

### 4 Exercise voting rights at Swedish AGMs

AP4 gives priority to companies in which it has major holdings, has a large share of votes, and/or to issues of fundamental importance. During 2018 AP4 participated at the AGMs of 90 Swedish companies, of which eight by proxy.

### 5 Exercise voting rights at AGMs of foreign companies

AP4 gives priority to the largest companies in the respective markets – companies that the Council on Ethics works with and companies through which AP4 is supporting an international initiative. AP4 voted at a total of 1,061 AGMs of foreign companies during the 2018 AGM season.

### 6 Support initiatives for the adoption of corporate governance and stewardship codes internationally

AP4 is eager to provide constructive views and recommendations in connection with the adoption or updating of governance and stewardship codes.


**Key ratios - employees**

	2018	2017	2016	2015	2014
Number of employees, average	54	54	53	55	56
Of whom, women, %	33	35	37	38	36
Number of persons in Executive Management, average	7	7	8	7	5
Of whom, women, %	25	27	25	29	40
Average age	43	44	44	44	44
Employee turnover, %	19	11	11	11	9
Sickness-related absence, %	1.6	1.6	3.3	2.9	0.9

# Employees

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**The vision for our work with our employees and organisation is that with the right competence we can achieve our overall goals and develop operations together. To succeed as a pension fund it is important that all employees feel a sense of commitment and motivation to develop their work and strive to ensure that operations as a whole work in the best way possible. In AP4's HR strategy, priorities and activities have been identified that will contribute to the delivery of high returns at low costs.**

## Culture and our values

During 2018 AP4 worked with an HR strategy that aims to put AP4's values to work in practice and address future challenges in ensuring the organisation's long-term development and competence needs based on a sustainability perspective, which is a central part of the HR strategy. A sustainable work life and sustainable leadership are important for AP4 in achieving its overall objectives. Competent employees are a success factor in a knowledge-intensive operation such as ours. The company culture is one of the most essential conditions for building a successful organisation. As AP4 works in an environment with a fast pace of change, it is important to foster a culture that promotes professionalism, innovative thinking, implementation strength and cooperation. During 2018 AP4 worked on developing and building a foundation for these values in the operations. Equal treatment and gender equality are practised in all aspects of work with our employees and the organisation.

## Employees

We aspire to be a sustainable and attractive workplace for our employees. To promote long-term good health, all employees are offered regular health check-ups and a fitness subsidy. AP4 conducts market salary surveys on a regular basis to ensure that salary levels and remuneration packages are competitive and reasonable. We also conduct annual salary mapping to ensure that we do not have unreasonable pay differences between women and men in the organisation.

## Employee survey

For the past several years AP4 has conducted yearly employee surveys aimed at identifying issues of central importance for ensuring that employees enjoy their work, feel motivated and continue to develop. The results of the annual employee surveys are followed up and analysed on a continuous basis. The areas in need of improvement that have been identified in the employee survey are addressed through a systematic process. Every unit in the organisation discusses the survey results, and an employee work group is formed every year with representatives from the various units. The work group is tasked with coming up with concrete activities for continued improvement work in the areas identified in the employee survey. In general the 2018 survey showed good results in all areas. The results of the survey were reported internally and addressed in accordance with AP4's process for improvement.

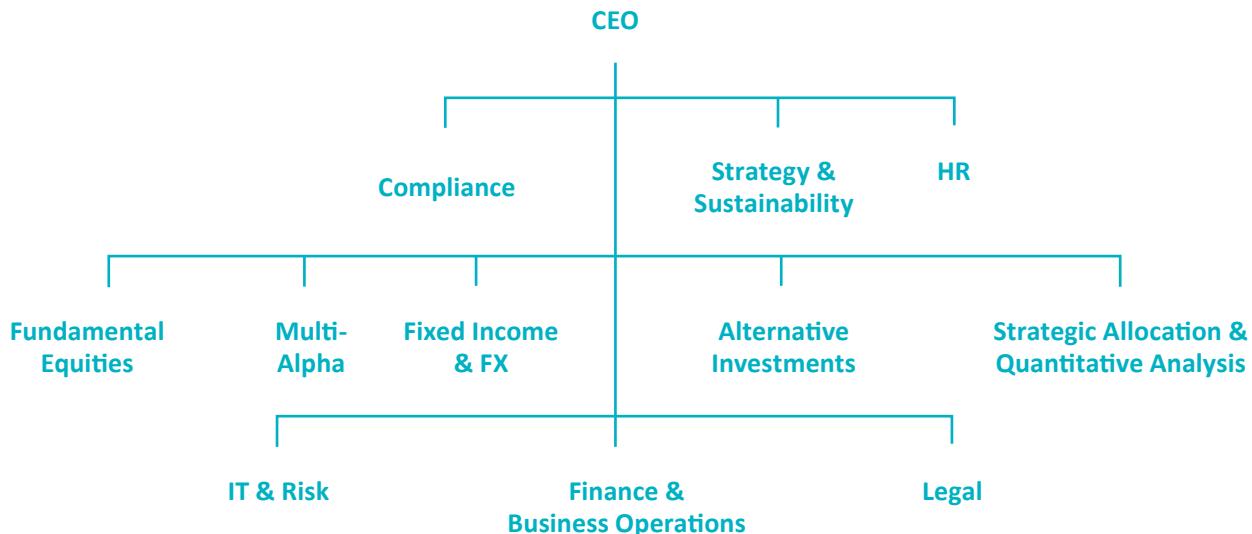
## Personnel and ethics-related policies

Every year AP4's board of directors adopts a personnel and ethics-related policy that is based on statutory regulations as well as ethical rules. The CEO also formulates a number of internal guidelines. The policy and guidelines lay out rules on matters such as public procurement processes, remuneration and benefits, business travel, entertainment, employees' personal trading in securities, inside information and side jobs. AP4's policy also includes rules regarding bribery and conflicts of interest.

All employees at AP4 are responsible for their own compliance with the rules in the above-mentioned policy and its underlying guidelines. However, the guidelines state that moral or complex dilemmas are to be addressed in consultation with the employee's immediate manager.

AP4 also has a separate compliance function that reports directly to the Board of Directors and CEO. The Compliance function monitors compliance with AP4's rules and policy documents. The personnel- and ethics-related rules outlined above make up part of AP4's introductory training for new employees.

# Organisation



At year-end 2018, 54 (53) persons worked for AP4, including 26 (22) in asset management and 28 (31) in business support, control and staff functions.

**Compliance** is directly subordinate to the CEO and also reports directly to AP4's board.

The **Strategy & Sustainability** unit assists the CEO on matters concerning strategy, sustainability, communication and CEO support.

Asset management is organised into five units: **Fundamental Equities**, **Multi-Alpha**, **Fixed Income & FX**, **Alternative Investments**, and **Strategic Allocation & Quantitative Analysis**.

**HR** works with HR strategic issues with focus on development of employees, leadership and organisation.

**IT & Risk** manages the IT platform and performs risk and return analyses.

**Finance & Business Operations** is organised into the units Business Operations, Finance, Office Administration and HR Administration.

**The Legal unit** works with legal support, contract negotiation and interpretation of laws and regulations.

AP4's direct environmental impact	2018	2017	2016	2015	2014
Total electricity use in own offices, MWh	107	111	113	112	113
District cooling use in own offices, MWh	51	44	89	109	109
Use of heat in own offices, MWh	42	37	104	104	113
Use of water, m3	433	413	810	648	648
Use of paper, tonnes	0.7	1.1	1.0	1.1	1.1
Ecolabelled paper as share of total paper use, %	100	100	100	100	100
Business travel by air, km 10,000s	51	46	57	64	57
Business travel by air, tonnes CO2 emissions	57	52	63	75	64

AP4 also reports on the direct environmental impact of its own operations. The main environmental impacts come from offices and business travel.

# Awards

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**During 2018 AP4 received a number of significant awards for its asset management and management of climate risk in the portfolio**



ASSET OWNERS DISCLOSURE PROJECT

## IPE

Every year the Investment & Pensions Europe conference in Dublin gathers leading pension fund managers from throughout Europe. In connection with each year's conference, industry-leading achievements are highlighted in the IPE Awards. In 2018 – in competition with 459 contributions from 24 countries – AP4 won first place awards for its asset management in five categories, which is more than any of the participating pension funds:

### Sweden

"A high quality submission, taking account of climate risk in the portfolio, and realistically adjusting its medium-term targets to reflect current conditions"

### Portfolio Construction & Diversification

"Very well formulated and well structured governance set-up with portfolio diversification at many levels and directions"

### Equities

"Sophisticated and well-balanced approach that thoughtfully combines different elements, making good use of available scale"

### Active Management

"Sustainability focus aligned to long-term risk-aware active investing"

### Long-Term Investment Strategy

"A true long-term investor, with excellent performance, cost efficiency, integrated sustainability and active ownership"

## AODP

AP4 scored a first place ranking in an international analysis of the world's 100 largest pension funds. The analysis focused on how the funds take into account and address climate change in their operations. AP4 is one of two pension funds that earned the highest score, AAA. Other Swedish AP Funds also earned high rankings in the survey. The analysis was performed by the Asset Owners Disclosure Project (AODP), which analysed the funds' climate work based on the TCFD framework. TCFD (the Task Force on Climate-related Financial Disclosures) issues recommendations for climate reporting under assignment by the G20. TCFD is structured into four thematic areas: Governance, Strategy, Risk Management, and Metrics & Targets. AP4 supports TCFD's recommendations.

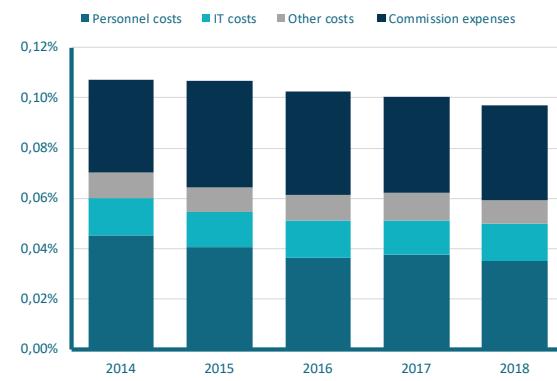
# Cost-efficient and transparent

**Focus on costs is important for achieving the goal for maximum sustainable returns over time. High quality at a low cost — or cost efficiency — is therefore a guiding principle for AP4.**

## Total management cost 0.10%

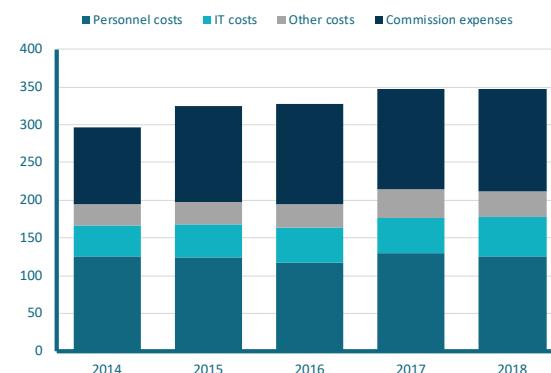
AP4's total management cost was 0.10 % (0.10 %) in 2018, measured as a percentage of average fund capital. The management cost consists of operating expenses and commission expenses. Operating expenses consist mainly of personnel costs, IT costs and cost of premises. Commission expenses consist mainly of fees paid to external asset managers and custodian fees.

## Management expense ratio (%)



AP4's operating expense ratio, which expresses operating expenses as a percentage of average fund capital, was 0.06% (0.06%). AP4's commission expense ratio was 0.04% (0.04%).

## Management cost (SEK m)



## AP4 is cost-efficient in an international comparison

AP4's cost level was 49% lower than a selection of comparable international pension funds, according to an independent survey conducted by CEM Benchmarking. The comparison was performed after adjusting for allocations to various asset classes and management strategies. Excluding such an adjustment, AP4's cost level was just under 40% of the comparison group's costs. The lower cost level is mainly due to the fact that AP4 has chosen to manage a large share of assets internally, but also to the allocation between active and passive management and to the fact that internal management costs per managed krona are lower compared with comparative international pension funds.

## Significant share of internal asset management

AP4 strives to manage assets internally when it is deemed to be cost-efficient, i.e., if AP4 can generate equal or higher returns for the same or lower cost than corresponding external management. This is based on the assumption that the right resources,

expertise and experience exist internally at AP4. A larger share of internal asset management therefore entails slightly higher operating expenses.

These consist of IT system and index costs and personnel costs, among other things. This higher level of operating expenses is compensated by lower commission expenses for external asset management.

### **External asset management and commission expenses**

For external mandates, AP4 negotiates with the aim to pay the lowest fees possible for the selected asset management strategy for an estimated maximum risk-adjusted return. Costs are steered by the choice of asset classes and asset management strategy. The goal is to achieve a high risk-adjusted return after costs. The lowest absolute cost is therefore not always an accurate measure. At the start of 2019 changed rules took effect, of which one entails that the previous requirement that a minimum of 10% of the portfolio be outsourced to external asset managers was eliminated. Over time this is expected to be significant for AP4's allocation of capital to external asset managers.

### **Cost-efficient direct investments in unlisted securities**

A significant share of AP4's exposure to holdings in unlisted property companies consists of its direct ownership in the companies Vasakronan and Rikshem. This is a long-term and cost-efficient investment form.

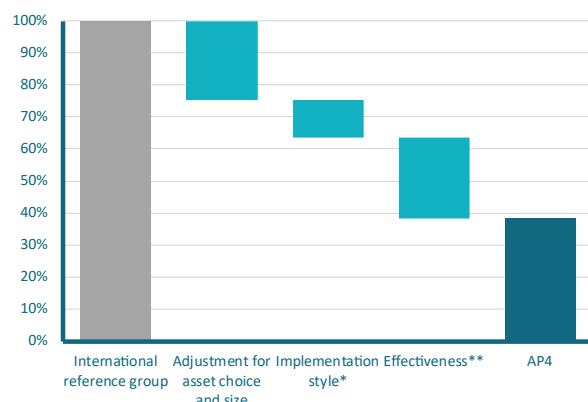
### **Transparency a guiding principle**

Transparency is a guiding principle for AP4 and essential for earning trust — both as a major, long-term investor and as a government agency. AP4 has many different stakeholders, and to facilitate external stakeholders' understanding, reviews and evaluations, a high level of transparency is important. AP4 strives for transparency in its reporting and communication as far as possible without infringing upon its operations.

### **Reviewed and evaluated by numerous stakeholders**

An AP Fund's operations and the review of such are regulated by law. The AP Funds' boards are appointed by the government. The Board monitors and continuously evaluates the asset management activities. External auditors conduct an annual audit of the operations and accounts. The government performs a special evaluation every year with the assistance of external consultants, who analyse and evaluate the operations. The government's review is summarised in a public report that is submitted to Swedish Parliament every year. The government's evaluation is a source of vital feedback and contributes to AP4's work on developing its operations. In addition, as a significant, public capital owner, AP4 is subject to the review and views of various stakeholder organisations.

### **AP4 cost comparison**



\* AP4 has a lower share of external asset management.

\*\* AP4 has a lower cost for external asset management, i.e., pays less for equivalent services.

# Directors' report 2018

## Portfolio return

Fund capital decreased by SEK -7.3 billion (22.7) to SEK 349.3 billion (356.6). The negative change in fund capital consists of the net result for the year of SEK -0.5 billion (30.1), i.e., the return for the year less management costs and net payments of SEK 6.8 billion (7.4) to the public pension system. AP4 has paid out a combined total of SEK 50.7 billion to the pension system since the system's net flows became negative in 2009.

SEK billion	2018	2017
Fund capital, opening balance	356.6	333.9
Net payments to the pension system	-6.8	-7.4
Net result for the period	-0.5	30.1
<b>FUND CAPITAL, CLOSING BALANCE</b>	<b>349.3</b>	<b>356.6</b>

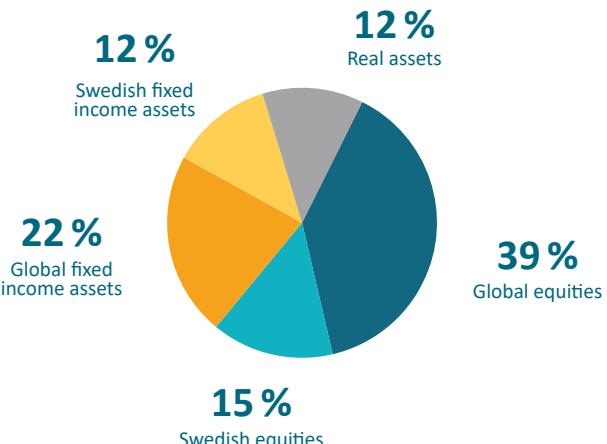
## Portfolio allocation

AP4's long-term mission and the higher anticipated return for equities compared with government bonds justifies a higher allocation to equities, despite the current, relatively high equity valuations and potential risks.

Significant exposure to Sweden in equities and fixed income investments is justified in part by a higher anticipated return relative to many other markets and in part by favourable opportunities for the Fund to generate excess returns and achieve lower currency hedging costs.

Starting in 2018 AP4 has defined Real Assets, such as real estate and infrastructure, as a separate asset class in the portfolio. What characterises real assets is that they generally have long-term and comparatively stable cash flows that are coupled to inflation. As a result, these assets contribute stable returns and diversification of risk, and are suitable components in the portfolio for a long-term investor such as AP4.

## Equities more than half of assets



## New asset management structure implemented in 2018

In 2018 AP4 implemented a new, overarching portfolio and asset management structure as well as new return targets that apply as from 2018. AP4 has two separate targets for evaluating the portfolio's return. In part, the portfolio's real total return is measured, and in part the operative asset management's active return in relation to a broad market portfolio is measured.

## Real return target

AP4's real return target is based on a long-term analysis of return potential and the pension system's obligations over a 40-year period. This is followed by a medium-term analysis over 10 years, which also takes into account the prevailing market situation and the current strength of the pension system. This results in a real return target of an average of 3% per year during the coming 10 years and a dynamic normal portfolio (DNP) that indicates a suita-

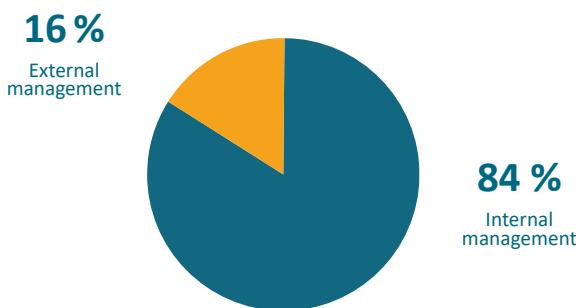
ble asset allocation. For a time horizon longer than 40 years, the target return is 4%. The fact that the real return target is currently 3% per year means that an initial period with this lower return target will need to be followed by a period for which the return exceeds 4% per year in order for AP4's long-term real return to average 4% over the full 40-year period. The new target applies as from 2018 and replaces the previous target of an average annual real return of 4.5%.

### Active management target

The continuing asset management is handled by AP4's operative asset management organisation. The portfolio's allocation and active management decisions are steered through the use of structured risk budgeting. Every year the Board sets a risk scope within which the operative asset management must act. For 2018, AP4's risk mandate was for a 5% active risk, and the active asset management target was a 1 percentage point excess return relative to the dynamic normal portfolio (DNP). The active asset management target for the operative asset management replaces the previous active return targets for strategic and tactical management. The operative asset management is evaluated over a five-year period.

### Share of external asset management

At year-end 2018, 84% (83%) of the assets were managed internally, and 16% (17%) of the assets were managed externally. AP4 manages assets internally when an aggregate assessment shows that internal management can achieve an equally good or better return at a lower cost. The legal requirement that a minimum of 10% of the portfolio be externally managed has been eliminated in connection with the changed rules for the AP Funds that took effect on 1 January 2019.



### Operative portfolio

The total return for the Fund was -0.1% (9.2%) before costs and -0.2% (9.1%) after costs. The portfolio is evaluated in relation to the dynamic normal portfolio (DNP). For 2018 the active return was 2.3 percentage points. Over the evaluation period of five years, the average excess return was 1.7% per year.<sup>1</sup>

### Global equities

The global equities management rests upon two building blocks: cost-efficient and quantitatively based asset management aimed at efficiently creating exposure to the stock markets; this is complemented by active management that is conducted by external managers that are chosen to provide a large diversification of sources for active returns and thus risk diversification. These differ in terms of regions, information sources and investment strategies, which enables a favourable risk-adjusted return over time. AP4 is lowering climate risk in the assets through low-carbon strategies and by not owning shares in companies where 20% or more of sales are derived from thermal coal or oil sand. The year's return for global equities was -8.5% (19.3%). The excess return for global equities management was 1.3% for 2018 and an average of 0.8% per year over the five-year evaluation horizon.

### Swedish equities

Swedish equities management is conducted from a starting point of fundamental company analysis, where long-term perspective, corporate governance and sustainability are key parts of the strategy. The goal is to outperform the market index by identifying companies with long-term favourable growth in value and equities with revaluation potential. The return for Swedish equities in 2018 was -1.1% (8.4%). Over several years, Swedish equities management has outperformed the index with favourable risk-adjusted returns. For 2018 the excess return was 3.3%. Over the five-year evaluation horizon, the average excess return was 1.5% per year.

### Global and Swedish fixed income investments

AP4's Fixed Income & FX unit is responsible for management of fixed income securities and currencies. Management is conducted actively with the goal to generate a higher return than the index. The fixed income portfolio is liquid, and creditworthy bonds with the highest credit ratings of AAA<sup>2</sup> accounted for slightly more than 71% of AP4's holdings of listed fixed income securities. Corporate bonds made up just under half of bond holdings at year-end. The return for the year was -0.9% (-0.1%) for AP4's global fixed income investments and 1.5% (1.1%) for Swedish fixed income investments. The excess return for fixed income investments was 0.2% for 2018 and an average of 0.3% per year over the five-year evaluation horizon.

### Real assets

Real assets today consist mainly of unlisted and listed real estate equities and to a lesser extent of funds focusing on infrastructure investments. Real assets make up 12% of the portfolio, and the goal is to increase this allocation over the long term. An example of this is the new, internal mandate for listed European property companies that was initiated in 2018. Real assets generated a return of 19.1% (17.2%) in 2018, which is 13.8% better than the return target. Over a five-year period the portfolio has generated an average return of 21.8% per year.

<sup>1</sup> For the period 2014-2017, active return pertains to the accumulated excess return from the Fund's previous tactical and strategic asset management with investment horizons of 0-3 years and 3-15 years, respectively, in relation to the Fund's previous reference portfolio, the Normal Portfolio.

<sup>2</sup> The credit risk classification presented (rating) pertains to an internal standard. The assessment in this standard for 2018 is based on the rating issued by the selected rating agency (Moody's Analytics UK Ltd).

Asset class	Market value, SEK bn	Portfolio return, %	Exposure <sup>1</sup> , %	Return contribution, %	Profit contribution, SEK bn
Global equities	135.8	-8.5	38.9	-3.5	-12.4
Swedish equities	51.0	-1.1	14.6	0.0	0.2
Global fixed income	76.8	-0.9	22.0	-0.2	-0.7
Swedish fixed income	42.6	1.5	12.2	0.2	0.6
Real assets	42.2	19.1	12.1	1.9	6.7
Other assets <sup>2</sup>	1.0	-0.1	0.3	-0.1	-0.5
Currencies	-0.0	1.5	-0.0	1.5	5.6
<b>Total investments<sup>3</sup></b>	<b>349.3</b>	<b>-0.1</b>	<b>100.0</b>	<b>-0.1</b>	<b>-0.3</b>

<sup>1</sup> Underlying values of derivative instruments in the passive allocation are distributed among the respective asset classes.

<sup>2</sup> Consists mainly of various overlay mandates.

<sup>3</sup> Portfolio return, return contribution and profit contribution before costs. The portfolio return and return contribution after costs was -0.2 %. The profit contribution after costs was SEK -0.5 billion.

## Currency

AP4 hedges parts of its foreign assets. Currency management involves in part the handling of AP4's currency hedging portfolio and in part active currency management. AP4's currency exposure, i.e. the share of assets in foreign currency that is not neutralised through currency hedges, was 18.4% (18.4%) of total at year-end. The return contribution from the Fund's open currency exposure was 1.5 percentage points (-1.1).

## Other assets

Other assets mainly include asset allocations in the form of so-called overlay mandates over several time horizons. The return contribution was -0.1 percentage points (-0.1).

## Cost-efficient asset management

AP4's total management cost was 0.10% (0.10%), measured as a percentage of average fund capital. The management cost consists of operating expenses and commission expenses. Operating expenses consist mainly of personnel costs, IT costs and cost of premises. Commission expenses consist mainly of fees paid to external asset managers and custodian fees.

AP4's operating expense ratio, which expresses operating expenses as a percentage of average fund capital, was 0.06%. AP4's commission expense ratio was 0.04% (0.04%).

Management costs	2018	2017
Operating expenses, SEK m	211.3	213.9
Commission expenses, SEK m	135.3	132.3
Operating expense ratio, % <sup>1</sup>	0.06	0.06
Operating expense ratio, % <sup>2</sup>	0.10	0.10

<sup>1</sup> Operating expenses as a percentage of average fund capital.

<sup>2</sup> Operating expenses including commission expenses as a percentage of average fund capital.

## Collaboration with other AP Funds

The existence of the four independent buffer funds, AP1-AP4, has contributed to well-working and sound competition, which in turn has contributed to cost-efficient asset management. It has also led to a relationship in which the significant economic position in Sweden conveyed by this buffer capital has been spread out and not become overly concentrated.

In areas that do not risk inhibiting competition between the Funds, the AP Funds can collaborate to achieve cost savings and efficient use of resources. One of the more important areas of collaboration is within the framework of the Council on Ethics of the AP Funds, which draws attention to issues and carries on a dialogue with listed companies to influence them to make improvements regarding environmental and ethical issues.

An additional nine cooperation teams work on standardisation and efficiency improvements in administration of the AP Funds, share knowledge and experience, and conduct joint procurement processes.

Since 2016 the CEOs of AP1, AP2, AP3 and AP4 have directed greater focus on cooperation between the Funds in the aim of achieving greater cost efficiency, creating synergies and ensuring a relevant exchange of experience, knowledge and work methods between the organisations. This cooperation is already conducted in a number of established forums and will be intensified on a project basis.

### Cooperation groups:

- Environment and ethics (conducting joint dialogues with foreign listed companies to advocate for improvements, share experience and coordinate suitable indicators for climate risk, joint stakeholder dialogues, etc.)
- Corporate governance (voting platforms, etc.)
- Legal and compliance (rules and regulations, procurement processes, registers and filings, etc.)
- Finance (accounting)
- Back office (systems, custodians, clearing houses, etc.)
- IT (system administration structures, tendering processes, licences, application solutions, etc.)
- Risk control and return analysis
- HR (salary mapping, development programmes for specialists at the AP Funds, etc.)
- Communication (joint knowledge-building seminars for industry colleagues and other interested parties, external activities for students at technical and business colleges, etc.)

## Examples of cooperation between the AP Funds in 2018

The most extensive cooperation is conducted within the Council on Ethics of the AP Funds (The Council on Ethics), a collaborative body formed in 2007 by AP1, AP2, AP3 and AP4. The Council on Ethics is made up of two representatives from each of the AP Funds and a common secretary general. Acting jointly with the backing of the AP Funds' collective capital creates greater opportunities to influence a company to make improvements compared with if the Funds were to act individually on their own. The Council on Ethics is also an attractive partner for other international investors with similar agendas for environmental and ethical issues, which further increases opportunities to influence. Through this cooperation the AP Funds' work is more efficient in terms of time and costs, as it allows for more company dialogues, international investor initiatives and conferences in which the Council on Ethics is represented.

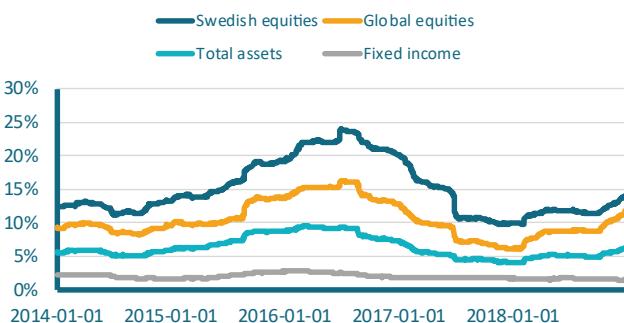
To cost-effectively vote at general meetings of companies in the Fund's global equity holdings, AP4 uses an electronic voting platform that it shares together with AP1, AP2 and AP3. However, each AP Fund votes independently on behalf of its respective holdings. Another example of cooperation between AP1, AP2, AP3 and AP4 is the jointly prepared document "The AP Funds' accounting and valuation principles", which aims to ensure that the AP Funds apply uniform accounting principles and that their annual reports are thereby comparable. The document is updated on a regular basis and is discussed yearly with the AP Funds' auditors.

In procurement processes, the Funds cooperate on a continuing basis to ensure that these are conducted jointly where possible. For example, during the year the Funds were able to coordinate procurement surrounding the General Data Protection Regulation (GDPR), payroll systems and telephony.

## Portfolio risk

### Increase in portfolio risk in 2018

The Fund has high exposure in equities, which is necessary given the goal of generating a high real rate of return over time. This consists mainly of listed, liquid shares that are invested globally. Volatility in the stock markets increased significantly during the



past year. As a result, AP4's portfolio volatility also increased during the year. Volatility in the fixed income markets was relatively low and stable during the year, however.

In total, the portfolio risk for AP4's combined assets, measured with a 12-month historical standard deviation, increased to 6.4% (4.1%) at year-end.

Using short-term changes in market movements as a measure of risk is standard practice, but it entails a risk for inaccuracy due to the very long-term investment horizon for the portfolio. For this reason, AP4 works with several investment horizons between 5 and 40 years so that it can take developments in the near term into account without losing sight of the long-term target.

### Active risk

With the new portfolio structure, active risk is measured for the operative portfolio in relation to the dynamic normal portfolio (DNP), which is a benchmark portfolio consisting of market indexes that reflects AP4's medium-term asset allocation. The active risk for AP4's operative asset management decreased slightly during the year and ended at 1.5%, compared with 1.7% at the start of the year.

### Interest rate risk

During the past year, interest rate risk, measured in terms of modified duration, fluctuated between 2.3% and 5.4%, which is the limit range set for the fixed income portfolio.

### Currency exposure

AP4's open currency exposure for the total portfolio varied between 16.6% and 19.4% during the year. AP4's greatest exposure was to the US dollar, which strengthened against the Swedish krona during the year.

### Sovereign exposures

AP4's sovereign exposures with credit ratings below AAA<sup>1</sup> in the Eurozone area increased during the year, mainly due to increased investments in Italian government bonds.

### Exposure to issuers

AP4's five largest exposures to issuers together amounted to slightly more than SEK 81 billion (75). Of these, a large share were in the banking and financial sector. The 15 largest holdings in the banking and financial sector represented a combined exposure of SEK 51 billion (55), of which SEK 42 billion (42) pertained to exposure to the Swedish banking and financial sector.

### Credit risk

The share of listed AAA<sup>1</sup> rated bonds fluctuated between 71% and 82% of the fixed income portfolio during the year. The share of BBB<sup>1</sup>-rated bonds averaged 15%.

<sup>1</sup>The credit risk classification presented (rating) pertains to an internal standard. The assessment in this standard for 2018 is based on the rating issued by the selected rating agency (Moody's Analytics UK Ltd).

## Changed investment rules for the AP Funds

Swedish Parliament decided on changed rules for the AP Funds, which took effect on 1 January 2019. The changes entail that AP1-AP4 may invest more assets in illiquid assets, the required minimum allocation to fixed income securities in the Funds' portfolios was reduced, and the requirement for external asset management was removed.

A clear risk for AP4 falling short of its return target over time has been the legal requirement that a minimum of 30% assets be invested in fixed income securities with low credit and liquidity risk.

With the very low interest rates and thus an anticipated medium-term negative real rate of return for fixed income investments, this legal requirement presented difficulties in generating the return needed to meet the AP Funds' mission in the pension system. The changes have given the AP Funds greater flexibility to perform their mission, which will ultimately benefit current and future pensioners.

## Exemplary asset management and continued development in sustainability

The changed rules for the AP Funds also stipulate that the AP Funds shall manage the pension funds in an exemplary manner through responsible investments and responsible ownership. The goal of exemplary management is to be achieved without the AP Funds compromising on the overarching goal of achieving a long-term high return.

During 2018 AP4 continued its work on further reducing the carbon footprint of its global equity portfolio, such as by divesting holdings in companies with substantial exposure to thermal coal and oil sand. These are fossil fuels with high CO<sub>2</sub> intensity per energy unit, and AP4 believes that these must be phased out in a global transition to a low-fossil society in line with the UN's Climate Convention and the Paris Agreement. AP4 is also working with proactive sustainability investments aimed at contributing to and benefiting from the current shift to a low fossil fuel economy. During the year AP4 made several such investments, including in a fund that invests in and contributes to the development of green bonds in emerging markets and a fund that invests in unlisted growth companies that are contributing to sustainable development

Additional changes during the year included the decision by AP4 to no longer invest in companies with operations related to the development and modernisation of nuclear weapons.

## Changes in personnel

Employee turnover at AP4 was 19% in 2018. At year-end the number of employees was 54 (53).

## Remuneration

For a manager of public pension funds it is essential that employee remuneration levels are reasonable, justifiable and explainable. AP4 strives to ensure that its remuneration is in line with the market and enables the AP4 to attract and retain talented employees. AP4 shall not be a salary leader. The Board bears ultimate responsibility for remuneration issues. Every year the Board sets principles for remuneration and other terms of employment. The Board is responsible for monitoring compliance with the government's guidelines for terms of employment for senior executives in the AP Funds. The Board solicits the help of external consultants to monitor compliance with the remuneration principles.

The Board has appointed a remuneration committee that is tasked with serving in an advisory role for the Board and for drafting remuneration matters for the CEO and senior executives. The Remuneration Committee also conducts drafting work for matters related to AP4's principles for remuneration and other terms of employment for all employees. Total remuneration for an AP4 employees consists of fixed salary, variable salary, pension provisions and other benefits. The CEO, senior executives, and the Compliance Officer and Head of Risk Control do not receive any variable remuneration. For other employees, variable remuneration can amount to a maximum of two months' salary upon the achievement of clear and measurable goals. Variable remuneration is based on group-oriented and individual quantitative performance goals measured over a rolling three-year period. Variable remuneration is payable only if AP4 posts a positive total net result for the financial year. Other benefits are of limited value and are offered to all employees. Examples include health insurance, group insurance and fitness subsidies. AP4 also has four parking spaces that employees can use whereupon they are taxed for the benefit. Further information is provided in Note 6 and in AP4's fund governance report on page 66.

## Significant events after the end of the financial year

No significant events have taken place since year-end 2018 that require disclosure.



AP4's operative asset management generated a return contribution of +2.3 percentage points for 2018.

# Financial statements and note disclosures

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## Five-year overview

Several-year overview	2018	2017	2016	2015	2014
<b>FUND CAPITAL, FLOWS AND PROFIT, SEK BILLION</b>					
Fund capital	349.3	356.6	333.9	310.0	294.9
Net flows to the pension system	-6.8	-7.4	-6.6	-4.9	-5.1
Net result for the year	-0.5	30.1	30.5	20.1	40.2
<b>RETURN, %</b>					
Return, total portfolio before costs	-0.1	9.2	10.1	6.9	15.8
Return, total portfolio after costs	-0.2	9.1	10.0	6.8	15.7
Return, total portfolio after costs, annualised 5 yrs	8.1	11.5	12.0	9.7	10.5
Return, total portfolio after costs, annualised 10 yrs	9.9	7.3	6.7	6.7	7.6
<b>OPERATING EXPENSE RATIO AS % OF AuM (ANNUALISED)</b>					
Operating expenses	0.06	0.06	0.06	0.06	0.07
Operating expenses and commission expenses	0.10	0.10	0.10	0.11	0.11
<b>RISK, %<sup>1</sup></b>					
Standard deviation ex-post, Total portfolio	6.4	4.1	7.3	8.8	6.0
Standard deviation ex-post, Liquidity portfolio <sup>2</sup>	7.0	4.5	7.8	9.4	6.4
Standard deviation ex-post, Total portfolio, 10 yrs <sup>3</sup>	7.5	8.6	8.8	9.0	8.6
Sharpe ratio total portfolio, ex-post	0.1	2.5	1.5	0.8	2.5
Sharpe ratio liquidity portfolio, ex-post <sup>2</sup>	neg	2.0	1.2	0.6	2.3

<sup>1</sup> Refers to daily return data unless indicated otherwise.

<sup>2</sup> Refers to liquid assets excluding unlisted properties, private equity funds and high-yield fixed income assets.

<sup>3</sup> Refers to quarterly data for total assets.

## Cont. Five-year overview

<b>Other key ratios, as per closing date</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Active return, before costs, % <sup>1,2</sup>	2.3	-1.1	1.0	4.8	1.4
Inflation, %	2.0	1.7	1.7	0.1	-0.3
Real return after costs, %	-2.3	7.4	8.3	6.8	16.0
Active risk ex-post, active management, % <sup>3</sup>	1.5	1.7	2.7	2.8	1.9
Currency exposure, %	18.4	18.4	26.9	27.0	28.1
Proportion external management incl. investments in private equity companies, % <sup>4</sup>	16.2	17.0	22.7	22.4	25.4
Number of employees on balance sheet date	54	53	54	55	54
<b>ALLOCATION OF INVESTMENTS, % <sup>5,6</sup></b>					
Global equities	38.9	40.8	40.2	39.4	41.7
Swedish equities	14.6	16.6	17.6	17.8	18.0
Global fixed income	22.0	21.1	22.7	20.5	20.7
Swedish fixed income	12.2	11.6	10.6	14.5	13.2
Real assets	12.1	9.6	8.6	7.3	5.9
Other	0.3	0.3	0.3	0.5	0.5
<b>TOTAL INVESTMENTS, %</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup>The Fund's operative portfolio is evaluated against a benchmark portfolio made up of a number of market indexes with set asset weights. In connection with the new asset management structure in 2018, the benchmark portfolio's market index – which was previously adjusted for, among other things, the Fund's tax status, ethic aspects through company exclusions and excluding non-US REITs – has been updated with standardised index currency-hedged to SEK in order to simplify and increase transparency. For 2018, the contribution from the fund's active exercise of tax status as a state pension fund was 0.18 percentage points.

<sup>2</sup> Active return, calculated as the difference in returns between the operative portfolio and the benchmark portfolio.

<sup>3</sup> Active risk, calculated as standard deviation, measured on a yearly basis, in the difference in the return between the operative portfolio and the benchmark portfolio.

<sup>4</sup> Wholly or partly owned property companies are reported as internally managed.

<sup>5</sup> Refers to exposure; underlying derivative values in the passive allocation have been distributed among the respective asset classes.

<sup>6</sup> In connection with the new asset management structure, minor adjustments have been made in the asset classes as well as in the assets within the respective asset classes. "Other" mainly includes mandates without capital. Comparison figures for earlier years are presented in accordance with the new asset management structure.

# Income statement

SEK million	Note	2018	2017
<b>OPERATING INCOME</b>			
Net interest income	2	1 978	1 783
Dividends received		6 583	5 736
Net income/loss, listed shares and participations	3	-11 862	24 908
Net income, unlisted shares and participations	4	4 976	3 032
Net income/loss, fixed income assets		-566	-120
Net income/loss, derivative instruments		-4 484	-185
Net income/loss, changes in exchange rates		3 196	-4 744
Commission expenses	5	-135	-132
Other income		-	0
<b>Total operating income</b>		<b>-314</b>	<b>30 278</b>
<b>OPERATING EXPENSES</b>			
Personnel costs	6	-126	-130
Other administrative expenses	7	-85	-84
<b>Total operating expenses</b>		<b>-211</b>	<b>-214</b>
<b>NET RESULT FOR THE YEAR</b>		<b>-525</b>	<b>30 064</b>

# Balance sheet

SEK million	Note	31/12/2018	31/12/2017
<b>ASSETS</b>			
Shares and participations, listed	8	190 635	209 592
Shares and participations, unlisted	9	36 077	29 914
Bonds and other fixed income assets	10	115 163	111 321
Derivate instruments	11	4 806	3 254
Cash and cash equivalents		3 484	5 467
Other assets	12	1 020	2 686
Prepaid expenses and accrued income	13	1 338	1 375
<b>TOTAL ASSETS</b>		<b>352 523</b>	<b>363 609</b>
<b>LIABILITIES AND FUND CAPITAL</b>			
Liabilities			
Derivative instruments	11	1 659	2 265
Other liabilities	14	487	4 154
Prepaid income and accrued expenses	15	1 065	581
<b>Total liabilities</b>		<b>3 211</b>	<b>7 000</b>
Fund capital	16		
Fund capital, opening balance		356 609	333 920
Net payments to the pension system		-6 772	-7 375
Net result for the year		-525	30 064
<b>Total fund capital</b>		<b>349 312</b>	<b>356 609</b>
<b>TOTAL LIABILITIES AND FUND CAPITAL</b>		<b>352 523</b>	<b>363 609</b>
Pledged assets, contingent liabilities and commitments	17		

# Notes to the income statement and balance sheet

**The Fourth Swedish National Pension Fund (AP4), corporate identity number 802005-1952, is one of the buffer funds in the Swedish national pension system and has its registered office in Stockholm. The Annual Report for the 2018 financial year was approved by the Board of Directors on 20 February 2019. The income statement and balance sheet shall be adopted by the government.**

## 1 Accounting and valuation principles

According to the Swedish National Pension Funds Act (Lagen (2000:192) om allmänna pensionfonder), the annual report shall be prepared in accordance with generally accepted accounting principles, whereby the assets in which AP4's funds are invested shall be recognised at market value. Based on this premise, AP1–AP4 have drawn up and applied uniform accounting and valuation principles, as summarised below.

The AP Funds' accounting and valuation principles are gradually being adapted to International Financial Reporting Standards (IFRS). Since IFRS is under extensive revision, adaptation thus far is focused on the disclosure requirements in IFRS 7 and IFRS 13. A complete adaptation to IFRS would not materially affect the reported results and capital. AP4 meets the requirement to be classified as an investment company in accordance with IFRS 10. In the current IFRS the only major difference is that a statement of cash flows has not been prepared.

### Trade date accounting

Transactions in securities and derivative instruments in the money market, bond market, stock market and currency market are recognised on the balance sheet as per the trade date, i.e., at the point in time when the material rights and risks are transferred between parties. The receivable or liability to the counterparty between the trade date and settlement date is recognised under Other assets and Other liabilities, respectively. Other transactions, mainly transactions in unlisted shares, are recognised on the balance sheet as per the settlement date, which is consistent with market practice.

### Net accounting

Financial assets and liabilities are reported net on the balance sheet when there is a legal right to offset transactions and there is an intention to settle net or realise the asset and settle the liability simultaneously.

### Translation of foreign currencies

Transactions in foreign currency are translated to Swedish kronor (SEK) at the exchange rate in effect on the transaction date. On the balance sheet date, assets and liabilities in foreign currency are translated to SEK at the exchange rate in effect on the balance sheet date. Changes in the value of assets and liabilities in foreign currency are broken down into a part attributable to the change in value of the asset or liability in local currency and to a part attributable to the changed exchange rate. The exchange gain

or loss that arises from changes in exchange rates is reported in the income statement on the line "Net income/loss, changes in exchange rates".

### Shares in subsidiaries and associated companies

According to the Swedish National Pension Funds Act, both shares in and loans to subsidiaries and associated companies are measured at fair value. Fair value is determined using the same methods used for unlisted shares and participations. There is no requirement to prepare consolidated accounts. Loans to subsidiaries and associated companies that are intended to be held to maturity are measured at fair value in accordance with the fair value option provided in IFRS 9. However, the entire change in value is reported as part of the shareholding on the line Net income/loss, unlisted shares and participations.

### Valuation of financial instruments

All of AP4's investments are measured at fair value, whereby realised and unrealised changes in value are recognised through profit or loss. The line Net income/loss per asset class thus includes realised and unrealised gains or losses. Equity instruments held for trading are therefore measured at fair value through profit or loss. Debt instruments held for trading are therefore measured at fair value through profit or loss. Loans to subsidiaries and associated companies are intended to be held to maturity; however, the fair value option is used here in order to be in compliance with the requirements in the Swedish National Pension Funds Act for fair value measurement. The AP Funds measure all of their assets at fair value. Following is a description of how fair value is determined for AP4's various investments.

### Listed shares and participations

For shares and participations traded in a regulated market or trading platform, fair value is determined based on official year-end market quotations according to the Fund's designated index, usually an average price. Holdings not included in an index are measured at quoted prices observable in an active market. Brokerage fees paid are recognised as expenses under Net income/loss, listed shares.

### Unlisted shares and participations

For shares and participations not traded in a regulated market or trading platform, fair value is determined based on a valuation obtained from the counterparty or other external party. The reported value is updated when a new valuation has been obtained and is adjusted for any cash flows up to the end of the accounting period. In cases where the Fund has good reason to believe that the valuation is incorrect, an adjustment is made of the received valuation. Valuations of unlisted participations are made in accordance with the International Private Equity and Venture Capital (IPEVC) Valuation Guidelines, or equivalent principles, and are to be based primarily on transactions with third parties, however, other valuation methods may be used.

Valuations of unlisted shares in property companies are based on a market valuation of the properties taking into account a market-based deduction for deferred tax liabilities, to the extent

that the stock has not been subject to transactions in a secondary market. This may differ from the valuation of deferred tax liabilities that is used in the accounting of the property companies.

### Bonds and other fixed income assets

For bonds and other fixed income assets, fair value is calculated based on the official market quotation on the balance sheet date (usually the bid rate) according to AP4's designated index provider. Holdings not included in an index are valued at quoted prices observable in an active market. In cases where an instrument is not traded in an active market, and reliable market prices are not available, the instrument is measured using generally accepted valuation models, which entails that cash flows are discounted to the relevant yield curve.

Interest income includes interest calculated using the effective interest method based on amortised cost. Amortised cost is the discounted present value of future payments, where the discount rate consists of the effective interest rate at the date of acquisition. This means that acquired surplus and deficit values are allocated over the remaining term or until the next interest rate adjustment and are included in reported interest income. Changes in value attributable to changes in interest rates are reported in "Net income, fixed income assets", while changes in value attributable to exchange rate changes are reported in "Net income/loss, changes in exchange rates".

### Derivative instruments

For derivative instruments, fair value is calculated based on year-end quotations. In cases where an instrument is not traded in an active market and reliable market prices are not available, the instrument is measured using generally accepted valuation models, in which observable market data is used as the input data.

Derivative contracts with positive fair value at the balance sheet date are reported as assets, while contracts with a negative fair value are reported as liabilities. Changes in value attributable to changes in exchange rates are reported in the income statement under "Net income/loss, changes in exchange rates", while other changes in value are reported as "Net income, derivative instruments". The difference between forward and spot rates for currency forwards is allocated on a linear basis over the term of the contract and is reported as interest.

### Buy-backs

In genuine repurchase transactions, so-called repos, the sold asset remains on the balance sheet and the payment received is recognised as a liability. The sold security is recognised as a pledged asset on the balance sheet among memorandum items. The difference between the settlement in the spot and futures market is allocated over the term and recognised as interest.

### Securities lending

Securities lent are reported on the balance sheet at fair value, while the compensation received for the loan is reported as interest income in the income statement. Collateral received for loaned securities can consist of securities and/or cash. In cases where AP4 has the right of disposal over cash received as collateral, the collateral is reported on the balance sheet as an asset and corresponding liability. In cases where AP4 does not have disposal over the security, it is not reported on the balance sheet, but is specified separately in a note under the heading "Pledged assets,

contingent liabilities and commitments". This item also includes the value of securities on loan and their related collateral.

### Items recognised directly against fund capital

Incoming and outgoing payments that have been made against the pension system are reported directly in fund capital.

### Commission expenses

Commission expenses are recognised in the income statement as a deduction from operating income. They consist of external costs for asset management services, such as custodian fees and fixed fees to external asset managers as well as fixed fees for listed funds. Performance-based fees, which are paid when asset managers achieve returns above the agreed level where profit-sharing is applied, are recognised as a deduction under net income for the relevant asset class.

Asset management fees for unlisted shares and participations, for which a refund is permitted before profit-sharing and where repayment is deemed likely, are recognised as an acquisition cost and are therefore included in the unrealised result. In other cases, they are reported as commission expenses.

### Operating expenses

All asset management costs, excluding brokerage fees, fees paid to external asset managers and custodian fees, are recognised as operating expenses. Investments in equipment including in-house developed and purchased software are normally expensed as they are incurred.

### Taxes

AP4 is exempt from all income tax on investments in Sweden. Taxes on dividends and withholding taxes assessed in certain countries are reported net in the income statement under the respective income classes.

As of 2012, AP4 is registered for value added tax (VAT) and is thereby subject to VAT on purchases made abroad. AP4 is not entitled to recover paid VAT. Expensed VAT is included in the expense item to which it belongs.

### Amounts in SEK millions

Amounts are specified in millions of Swedish kronor (SEK m), unless otherwise indicated.

## 2 Net interest income

	2018	2017
<b>NET INTEREST INCOME</b>		
Bonds and other fixed income securities	1 917	1 728
Other interest income	61	55
<b>Total interest income</b>	<b>1 978</b>	<b>1 783</b>
<b>INTEREST EXPENSE</b>		
Other interest expenses	0	0
<b>Total interest expenses</b>	<b>0</b>	<b>0</b>
<b>NET INTEREST INCOME</b>	<b>1 978</b>	<b>1 783</b>

Owing to the adoption of IFRS 9 on 1 January 2018 and amendments to IAS 1, the interest component of derivative instruments is no longer reported on the line Net interest income, but instead on the line Net income/loss, derivative instruments. To facilitate comparisons with the preceding year, the comparison figures have been adjusted in a similar way and therefore differ from what was reported in the preceding year's annual report.

### 3 Net income, listed shares and participations

	2018	2017
Net income, listed shares and participations	11 897	24 934
Less brokerage fees	-35	-26
<b>NET INCOME, LISTED SHARES AND PARTICIPATIONS</b>	<b>11 862</b>	<b>24 908</b>

### 4 Net income, unlisted shares and participations

	2018	2017
Realised gains	480	223
Unrealised changes in values	4 496	2 809
<b>NET INCOME, UNLISTED SHARES AND PARTICIPATIONS</b>	<b>4 976</b>	<b>3 032</b>

Reporting of external asset management fees for unlisted assets is done according to two different principles, depending on whether the respective underlying management agreements permit refunds prior to profit-sharing in connection with future profit-generating divestments or not. In cases where contracts permit such refunds, the refunded fees are reported as part of the asset's cost and are thereby charged against unrealised net income for unlisted assets. Consequently, refunded management fees have a positive effect on unrealised income. In cases where the contract does not permit refunds, paid fees are expensed directly under "Commission expenses".

During the year a total of SEK 93 (61) million was paid in asset management fees for unlisted assets, of which SEK 93 (61) million allow refunds in accordance with the above principle. Also during the year, SEK 30 (37) million was refunded, and the unrealised result for unlisted shares and participations was negatively affected by SEK 62 million (-24). Paid fees in which contracts did not allow refunds amounted to SEK 0 (0) and are reported as "Commission expenses", see Commission expenses.

### 5 Commission expenses

	2018	2017
External asset management fees, listed assets	-122	-119
External asset management fees, unlisted assets	0	0
Other commission expenses, including custodian fees	-13	-13
<b>COMMISSION EXPENSES</b>	<b>-135</b>	<b>-132</b>

Commission expenses do not include performance-based fees. Performance-based fees for the year totalled SEK 17 (44) million and reduced net income for the respective asset classes. External asset management fees for unlisted assets are reported under commission expenses to the extent agreements do not permit refunds prior to profit-sharing in connection with future profit-generating divestments.

### 6 Personnel

Number of employees	2018		2017	
	Total	Women	Total	Women
Average number of employees	54	18	54	19
No. of employees, 31/12	54	17	53	18
No. of persons in Executive Management, 31/12	8	3	8	2

### Costs for personnel reductions

Costs for personnel reductions in 2018 amounted to SEK 2,240 thousand (7,975) and pertained to compensation for salaries, pension costs and social security costs in connection with personnel reductions.

### Salaries and fees

Directors' fees are set by the government and were unchanged compared with the preceding year. The Board sets the terms of employment for the CEO based on a recommendation from the Remuneration Committee. Remuneration for the CEO, senior executives, the Compliance Officer and the head of Risk Control consists of a fixed salary. Every year, under commission by the Board of Directors and Remuneration Committee, an external consultant performs an examination of remuneration levels for senior executives of AP4. The Board can thereby ascertain that AP4 complies with the government's guidelines for remuneration of senior executives of the AP Funds. Read more about remuneration under the heading "Remuneration at AP4" in the annual report.

### Variable remuneration

The variable remuneration plan is part of AP4's remuneration policy and is adopted yearly by the Board. The plan covers all employees employed more than six months, except for the CEO, senior executives, the Compliance Officer and the head of Risk Control. The basic principle is that variable remuneration shall be paid for the achievement of excess returns relative to the benchmark and reference indexes, provided that AP4 shows a positive result for the financial year. The maximum outcome for a full-year employee is two months' salary. For 2018, a total of SEK 414 thousand (2,446) was expensed for variable remuneration, excluding social security costs.

### Pensions and similar benefits

The CEO's employment contract includes special stipulations for pension benefits and severance pay. The contract provides a pension entitlement at age 65, with a pension provision of 30% (30%) of salary. A mutual notice period of six months applies for the CEO. In the event AP4 serves notice, the CEO is also entitled to severance pay equal to 18 months' salary. Severance pay is paid out monthly and is reduced by any other income from salary, assignments or own business.

Other members of the Executive Management as well as other employees have individual employment contracts in which the notice period is based on the applicable collective agreement between the Employers Organisation of the Swedish Banking Institutions (BAO) and the Swedish Confederation of Professional Associations (SACO). Pension entitlements are either defined-benefit solutions in accordance with the applicable collective agreement between BAO and SACO, or defined-contribution solutions in accordance with AP4's pension policy, entailing a pension contribution of 30% of salary amounts higher than 7.5 times the Income Base Amount.

All employees are entitled to exchange a portion of their gross salary for pension contributions. In such cases, the pension contribution is increased by 5.8%, which corresponds to the difference between AP4's costs for payroll tax and its cost for the special employer's payroll tax on pension contributions. The procedure is cost-neutral for AP4.

## 6 Cont Personnel

All employees have supplemental health insurance. All persons employed before 1 January 2007 have, in addition to benefits under the pertinent collective agreement, disability insurance for periods of illness lasting longer than three months, for which a benefit is payable to cover 90% of salary amounts lower than 20 times the Base Amount and 80% of salary amounts higher than 20 times the Base Amount. The maximum benefit corresponds to 40 times the Base Amount. Benefits paid out are decreased by benefits payable from Försäkringskassan, SPP and any other insurances.

### Other benefits

All employees have the opportunity to purchase group life insurance that is taxed as an employment benefit. The CEO has the right to one parking space, which is taxed as an employment benefit. AP4 has an additional three parking spaces that employees can use, which also is taxed as an employment benefit. The value of these employment benefits in 2018 was SEK 210 thousand (177).

Personnel costs, SEK thousand, 2018	Salaries and remuneration	Variable remuneration	Pension costs	Of which, salary exchange	Social security costs <sup>2</sup>	Total
Chair of the Board Sarah McPhee	100	-	-	-	31	131
Other board members <sup>1</sup>	525	-	-	-	154	679
CEO Niklas Ekwall	4 617	-	1 332	-	1 774	7 723
<b>OTHER EXECUTIVE MANAGEMENT MEMBERS</b>						
Head of Global Macro Bengt Lindefeldt, until 30/6/2018	1 485	-	699	190	636	2 820
Head of Fundamental Equities Per Colleen	2 859	-	1 162	190	1 180	5 201
Head of Administration Susan Lindkvist, until 18/7/2018	854	-	396	32	364	1 614
Head of Finance & Business Operations Helene Lundkvist, from 3/9/2018	635	-	325	-	278	1 238
Head of IT & Risk Nicklas Wikström	1 635	-	930	317	739	3 304
General Counsel Ulrika Malmberg Livijn	1 790	-	738	127	741	3 269
Head of Strategy & Sustainability Tobias Fransson	2 112	-	708	-	835	3 655
Head of Strategic Allocation & Quantitative Analysis Marcus Blomberg	2 840	-	927	-	1 117	4 884
Head of Alternative Investments Jenny Askfelt Ruud, from 1/9/2018	625	-	333	-	277	1 235
Other employees	47 713	414	17 681	1 984	18 748	84 566
<b>Total</b>	<b>67 790</b>	<b>414</b>	<b>25 231</b>	<b>2 840</b>	<b>26 874</b>	<b>120 309</b>
Other personnel costs						5 735
<b>TOTAL PERSONNEL COSTS</b>						<b>126 044</b>

<sup>1</sup>Individual directors' fees are reported in the fund governance report.

<sup>2</sup>Social security costs also include payroll tax.

## 6 Cont Personnel

Personnel costs, SEK thousand, 2017	Salaries and remuneration	Variable remuneration	Pension costs	Of which, salary exchange	Social security costs <sup>2</sup>	Total
Chair of the Board Sarah McPhee	100	-	-	-	31	131
Other board members <sup>1</sup>	493	-	-	-	131	624
CEO Niklas Ekwall	4 521	-	1 332	-	1 744	7 597
<b>OTHER EXECUTIVE MANAGEMENT MEMBERS</b>						
Head of Global Macro Bengt Lindefeldt	3 046	-	1 269	254	1 265	5 580
Head of Fundamental Equities Per Colleen	2 716	-	1 115	190	1 124	4 955
Head of Administration Susan Lindkvist	1 524	-	1 037	381	730	3 291
Head of IT & Risk Nicklas Wikström	1 613	-	928	317	732	3 273
General Counsel Ulrika Malmberg Livijn	1 515	-	975	375	713	3 203
Head of Alternative Investments, Head of Strategy & Sustainability Tobias Fransson, from 29/6/2017 <sup>2</sup>	2 082	-	681	-	819	3 582
Head of Strategic Allocation & Quantitative Analysis Marcus Blomberg <sup>3</sup>	1 065	-	380	-	427	1 872
Other employees	50 936	2 446	17 369	2 678	20 340	91 091
<b>Total</b>	<b>69 611</b>	<b>2 446</b>	<b>25 086</b>	<b>4 195</b>	<b>28 056</b>	<b>125 199</b>
Other personnel costs						4 462
<b>TOTAL PERSONNEL COSTS</b>						<b>129 661</b>

<sup>1</sup> Individual directors' fees are reported in the fund governance report.

<sup>2</sup> Social security costs also include payroll tax.

## 7 Other administrative expenses

	2018	2017
Cost of premises	10	10
Information and IT costs	52	47
Purchased services	14	14
Other administrative expenses	9	13
<b>TOTAL OTHER ADMINISTRATIVE EXPENSES</b>	<b>85</b>	<b>84</b>

THE ITEM PURCHASED SERVICES INCLUDES FEES PAID TO THE AUDIT FIRM AS FOLLOWS:	
Audit assignments, PwC	0.8
Other audit services, PwC	-
<b>TOTAL FEES PAID TO AUDIT FIRM</b>	<b>0.8</b>

## 8 Shares and participations, listed

	31/12/2018 Fair value	31/12/2017 Fair value
Swedish shares	55 929	63 345
Foreign shares	93 408	106 857
Participation in Swedish funds	2 673	5 600
Participation in Foreign funds	38 626	33 790
<b>TOTAL SHARES AND PARTICIPATIONS, LISTED</b>	<b>190 635</b>	<b>209 592</b>

The scope of securities on loan as well as collateral received is presented in Note 17. A complete list of shareholdings can be found on AP4's website: [www.ap4.se](http://www.ap4.se).

## 8 Cont. Shares and participations, listed

### Five largest holdings of Swedish shares, 31/12/2018

	No. Shares	Fair value	Capital, %	Votes, %
Hennes & Mauritz B	22 752 678	2 867	1.37%	0.67%
Atlas Copco	12 605 942	2 506	1.03%	0.56%
Elekta	23 267 534	2 451	6.07%	4.49%
Volvo	19 843 022	2 303	0.93%	1.77%
Lifco	6 933 163	2 271	7.63%	4.76%

### Five largest holdings of Swedish shares, 31/12/2017

	No. Shares	Fair value	Capital, %	Votes, %
Atlas Copco	12 952 426	4 269	1.1%	0.7%
Volvo	23 018 774	3 519	1.1%	1.8%
Nordea	28 640 172	2 844	0.7%	0.7%
Hennes & Mauritz	16 550 181	2 802	1.0%	0.5%
Sandvik	17 530 691	2 519	1.4%	1.4%

### Five largest holdings of foreign shares, 31/12/2018

	No. Shares	Fair value
Apple	1 399 078	1 957
Microsoft Corp	2 086 512	1 879
Alphabet	178 156	1 643
Amazon.com	119 003	1 585
Johnson & Johnson	793 549	908

### Five largest holdings of foreign shares, 31/12/2018

	No. Shares	Fair value
Apple	1 689 269	2 341
Alphabet	200 662	1 725
Microsoft	2 370 017	1 660
Amazon.com	133 451	1 278
Facebook	771 195	1 114

## 9 Shares and participations, unlisted

	31/12/2018	31/12/2017
	Fair value	Fair value
Shares in Swedish associated companies	27 686	23 832
Shares in Foreign associated companies	853	695
Shares and participations in other Swedish unlisted companies	3 516	2 770
Shares and participations in other Foreign unlisted companies	4 022	2 617
<b>TOTAL SHARES AND PARTICIPATIONS, UNLISTED</b>	<b>36 077</b>	<b>29 914</b>

Shares in associated companies, 31/12/2018	Corp. ID no.	Domicile	No. Shares	Capital, %	Votes, %	Fair value	Equity	Profit
<b>SHARES IN SWEDISH ASSOCIATED COMPANIES</b>								
Vasakronan Holding AB	556650-4196	Stockholm	1 000 000	25	25	17 704	60 271	12 902
Rikshem Intressenter AB	556806-2466	Stockholm	250	50	50	9 982	18 337	2 490
<b>TOTAL SHARES IN SWEDISH ASSOCIATED COMPANIES</b>								
						<b>27 686</b>		
<b>SHARES IN FOREIGN ASSOCIATED COMPANIES</b>								
ASE Holdings S.à.r.l.		Luxemburg	1 609 214	38	38	160	Not public	Not public
ASE Holdings II S.à.r.l.		Luxemburg	215 023 696	45	45	512	Not public	Not public
ASE Holdings III S.à.r.l.		Luxemburg	5 121 867	35	35	181	Not public	Not public
<b>TOTAL SHARES IN FOREIGN ASSOCIATED COMPANIES</b>								
						<b>853</b>		

## 9 Cont. Shares and participations, unlisted

Other holdings, 12/31/2018	Corp. ID no.	Domicile	Capital, %	Votes, %	Cost
<b>FIVE LARGEST HOLDINGS IN OTHER SHARES &amp; PARTICIPATIONS, SWEDISH UNLISTED COMPANIES<sup>1</sup></b>					
Areim Investment 3-5 AB	559111-1165	Stockholm	50	9	737
Infranode I	556982-5283	Stockholm	20	20	375
Alfvén & Didrikson AB	556954-4066	Stockholm	25	18	264
LSTH Svenska Handelsfastigheter AB Pref	559009-2325	Stockholm	13	2	210
Areim Property Holding 5 AB	556963-0261	Stockholm	33	6	140
<b>FIVE LARGEST HOLDINGS IN OTHER SHARES &amp; PARTICIPATIONS, FOREIGN UNLISTED COMPANIES<sup>1</sup></b>					
White Peak Real Estate IV L.P.		Jersey	21		481
EQT Infrastructure II (No. 1) Feeder L.P.		UK	4		389
Infracapital Greenfield Partners I L.P.		UK	6		328
EQT Infrastructure III (No.1) Feeder SCSp		Luxemburg	2		291
Keyhaven Growth Partners L.P.		UK	29		159

<sup>1</sup> Refers to AP4's holdings in limited partnerships and other similar structures in which AP4 does not have significant influence.

A complete specification of shareholdings is available at [www.ap4.se](http://www.ap4.se)

Shares in associated companies, 31/12/2017	Corp. ID no.	Domicile	No. Shares	Capital, %	Votes, %	Fair value	Equity	Profit
<b>SHARES IN SWEDISH ASSOCIATED COMPANIES:</b>								
Vasakronan Holding AB	556650-4196	Stockholm	1 000 000	25	25	15 218	51 377	9 269
Rikshem Intressenter AB	556806-2466	Stockholm	250	50	50	8 614	15 846	2 395
<b>TOTAL SHARES IN SWEDISH ASSOCIATED COMPANIES</b>						23 832		
<b>SHARES IN FOREIGN ASSOCIATED COMPANIES:</b>								
ASE Holdings S.à.r.l.		Luxemburg	1 609 214	38	38	222	Not public	Not public
ASE Holdings II S.à.r.l.		Luxemburg	215 023 696	45	45	425	Not public	Not public
ASE Holdings III S.à.r.l.		Luxemburg	5 121 867	35	35	48	Not public	Not public
<b>TOTAL SHARES IN FOREIGN ASSOCIATED COMPANIES</b>						695		

Other holdings, 12/31/2017	Corp. ID no.	Domicile	Capital, %	Votes, %	Cost
<b>FIVE LARGEST HOLDINGS IN OTHER SHARES &amp; PARTICIPATIONS, UNLISTED SWEDISH COMPANIES<sup>1</sup></b>					
Areim Investment 3-5 AB	559111-1165	Stockholm	50	9	700
LSTH Svenska Handelsfastigheter AB Pref	559009-2325	Stockholm	13	2	210
iZettle pref E	556806-0734	Stockholm	-	-	196
Areim Fastigheter 3 AB	559035-9161	Stockholm	4	2	175
HealthCap Annex Fund I-II KB	556624-0783	Stockholm	20	20	174
<b>FIVE LARGEST HOLDINGS IN OTHER SHARES &amp; PARTICIPATIONS, FOREIGN UNLISTED COMPANIES<sup>1</sup></b>					
EQT Infrastructure II (No.1) Feeder L.P.		Netherlands	3		364
EQT V (No. 1) L.P.		Guernsey	2		232
Private Equity Multi-Strategy (AP) Offshore L.P.		Cayman Islands	95		199
Keyhaven Growth Partners L.P.		UK	29		159
Keyhaven Capital Partners III L.P.		UK	8		153

<sup>1</sup> Refers to AP4's holdings in limited partnerships and other similar structures in which AP4 does not have significant influence.

A complete specification of shareholdings is available at [www.ap4.se](http://www.ap4.se)

## 10 Bonds and other fixed income assets

	31/12/2018 Fair value	21/12/2017 Fair value
<b>BREAKDOWN BY ISSUER CATEGORY</b>		
Swedish State	5 873	7 092
Swedish mortgage institutions	28 897	26 480
Other Swedish financial services companies	8 904	10 128
Swedish non-financial companies	2 456	832
Foreign governments	54 988	50 861
Other foreign issuers	14 045	15 928
<b>TOTAL FIXED INCOME ASSETS</b>	<b>115 163</b>	<b>111 321</b>
<b>Breakdown by type of instrument</b>		
Other bonds	111 516	110 475
Subordinated loans	2 193	102
Unlisted promissory note loans	0	0
Unlisted shareholder loans	805	744
Participations in foreign fixed income funds	649	-
<b>TOTAL FIXED INCOME ASSETS</b>	<b>115 163</b>	<b>111 321</b>

The scope of securities on loan, as well as collateral received, is presented in Note 17.

## 11 Derivative instruments

	31/12/2018		31/12/2017	
	Fair value		Fair value	
	Positive	Negative	Positive	Negative
<b>EQUITY-RELATED INSTRUMENTS</b>				
Options held	-	-	123	77
<b>Total equity-related instruments</b>	<b>0</b>	<b>0</b>	<b>123</b>	<b>77</b>
of which, cleared	0	0	123	77
<b>INTEREST-RELATED INSTRUMENTS:</b>				
FRAs/Forward contracts				
Swaps	26	516	184	76
<b>Total interest-related instruments</b>	<b>26</b>	<b>516</b>	<b>184</b>	<b>76</b>
of which, cleared	-	-	-	-
<b>CURRENCY-RELATED INSTRUMENTS:</b>				
Options	719	364	640	332
Forward contracts	4 061	779	2 307	1 780
<b>Total Currency-related instruments</b>	<b>4 780</b>	<b>1 142</b>	<b>2 947</b>	<b>2 112</b>
of which, cleared	-	-	-	-
<b>TOTAL DERIVATIVE INSTRUMENTS</b>	<b>4 806</b>	<b>1 659</b>	<b>3 254</b>	<b>2 265</b>
of which, cleared	0	0	123	77

For details about areas of use and risk management for derivative instruments see Note 20 Risks, on page 58.

## Maturity analysis

Most of the AP4's derivatives have terms of less than one year. Only a few currency options, credit default swaps and currency forwards have longer terms, and of these 34 (31) contracts have a negative fair value. These are presented in the tables below.

### Maturity analysis of derivative positions with negative fair value, with terms longer than 12 months, 2018

Maturity structure	> 1 yr < 3 yrs	> 3 yrs < 5 yrs	> 5 yrs < 10 yrs	> 10 yrs
Issued currency options	-122	-13	-	-
Cross Currency Basis Swap	-	-	-	-
Credit Default Swap	-6	-	-92	-418
Currency forward contracts	-	-	-	-
<b>TOTAL</b>	<b>-128</b>	<b>-13</b>	<b>-92</b>	<b>-418</b>

### Maturity analysis of derivative positions with negative fair value, with terms longer than 12 months, 2017

Maturity structure	> 1 yr < 3 yrs	> 3 yrs < 5 yrs	> 5 yrs < 10 yrs	> 10 yrs
Issued currency options	-71	-53	-	-
Credit Default Swap	-	-3	-74	-
Currency forward contracts	-140	-	-	-
<b>TOTAL</b>	<b>-211</b>	<b>-56</b>	<b>-74</b>	<b>0</b>

## 12 Other assets

	12/31/2018	12/31/2017
Outstanding receivables	1 018	2 685
Other assets	2	1
<b>TOTAL OTHER ASSETS</b>	<b>1 020</b>	<b>2 686</b>

## 13 Prepaid expenses and accrued income

	12/31/2018	12/31/2017
Accrued interest income	1 070	1 112
Accrued dividends and repayments	261	256
Other prepaid expenses and accrued income	7	7
<b>TOTAL PREPAID EXPENSES AND ACCRUED INCOME</b>	<b>1 338</b>	<b>1 375</b>

## 14 Other liabilities

	12/31/2018	12/31/2017
Trade accounts payable	15	13
Outstanding liabilities	466	4 134
Other liabilities	6	7
<b>TOTAL OTHER LIABILITIES</b>	<b>487</b>	<b>4 154</b>

## 15 Deferred income and accrued expenses

	12/31/2018	12/31/2017
Accrued interest expenses	1 052	560
Accrued personnel costs	9	12
Accrued external asset management fees	1	3
Other accrued expenses	3	6
<b>TOTAL DEFERRED INCOME AND ACCRUED EXPENSES</b>	<b>1 065</b>	<b>581</b>

## 16 Fund capital

	12/31/2018	12/31/2017
Fund capital, opening balance	356 609	333 920
<b>NET PAYMENTS TO THE PENSION SYSTEM:</b>		
Paid-in pension contributions	69 552	66 850
Pension funds disbursed to the Swedish Pensions Agency	-76 109	-73 999
Transfer of pension rights to EG	-1	-2
Settlement of pension rights	2	2
Administration fees to the Swedish Pensions Agency	-216	-226
<b>TOTAL NET PAYMENTS TO THE PENSION SYSTEM</b>	<b>-6 772</b>	<b>-7 375</b>
<b>PROFIT FOR THE YEAR</b>	<b>-525</b>	<b>30 064</b>
<b>FUND CAPITAL, CLOSING BALANCE</b>	<b>349 312</b>	<b>356 609</b>

## 17 Pledged assets, contingent liabilities and commitments

	12/31/2018	12/31/2017
<b>OTHER PLEDGED ASSETS AND EQUIVALENT COLLATERAL:</b>		
Securities on loan against collateral received in the form of securities <sup>1</sup>	23 740	24 680
Collateral pledged for exchange-cleared derivative contracts	1 418	1 522
Pledged assets pertaining to OTC derivatives contracts <sup>2</sup>	630	1 474
<b>COMMITMENTS:</b>		
Investment commitments to future payments for alternative and strategic investments	12 847	9 491
Subscription Commitments, see Note 18	9 500	9 500

<sup>1</sup> Collateral received for loaned securities amounts to SEK 24,869 million (25,877).

<sup>2</sup> Collateral received for OTC derivative contracts amounted to SEK 400 million (255).

## 18 Related parties

The purpose of this note is to disclose how AP4's earnings and financial position have been affected by transactions and outstanding balances, including commitments, with related parties in accordance with the definitions in IAS 24. All associated companies are considered to be related parties to AP4, see also Note 9.

	12/31/2018	12/31/2017
<b>VASAKRONAN HOLDING AB</b>		
Interest income	9	9
Rental costs <sup>1</sup>	-	3
Commitments <sup>2</sup>	4 500	4 500
<b>RIKSHEM INTRESSENTER AB</b>		
Interest income	10	10
Commitments <sup>2</sup>	5 000	5 000
<b>ASE HOLDINGS S.À.R.L.</b>		
Interest income	28	26
Shareholder loans	226	222
<b>ASE HOLDINGS II S.À.R.L.</b>		
Interest income	31	28
Shareholder contributions during the year	-	33
Shareholder loans	364	357
<b>ASE HOLDINGS III S.À.R.L.</b>		
Interest income	7	3
Shareholder contributions during the year	55	57
Shareholder loans	112	57

<sup>1</sup> Through 31 March 2017 AP4 leased its premises from Vasakronan AB at market terms.

<sup>2</sup> At the request of Vasakronan and Rikshem, AP4 has committed to buying commercial paper in the respective companies up a value reported above.

For salaries and remuneration for board members and senior executives, see Note 6.

## 19 Financial instruments, price and valuation hierarchy

Fair value, SEK m	31/12/2018	31/12/2018	31/12/2018	31/12/2018
	Level 1	Level 2	Level 3	Total
<b>FINANCIAL ASSETS</b>				
Shares and participations, listed	152 605	34 579	3 450	190 635
Shares and participations, unlisted	-	-	36 077	36 077
Bonds and other fixed income securities	112 269	452	2 443	115 163
Derivative instruments	0	4 806	-	4 806
<b>Totala financial assets</b>	<b>264 874</b>	<b>39 837</b>	<b>41 970</b>	<b>346 681</b>
<b>FINANCIAL LIABILITIES</b>				
Derivative instruments	0	-1 659	-	-1 659
<b>Total financial liabilities</b>	<b>0</b>	<b>-1 659</b>	<b>-</b>	<b>-1 659</b>
<b>NET FINANCIAL ASSETS AND LIABILITIES</b>	<b>264 874</b>	<b>38 178</b>	<b>41 970</b>	<b>345 022</b>
Fair value, SEK m	31/12/2017	31/12/2017	31/12/2017	31/12/2017
	Level 1	Level 2	Level 3	Total
<b>FINANCIAL ASSETS</b>				
Shares and participations, listed	168 760	37 578	3 254	209 592
Shares and participations, unlisted	-	-	29 914	29 914
Bonds and other fixed income securities	109 809	131	1 382	111 321
Derivative instruments	123	3 131	-	3 254
<b>Totala financial assets</b>	<b>278 692</b>	<b>40 839</b>	<b>34 549</b>	<b>354 080</b>
<b>FINANCIAL LIABILITIES</b>				
Derivative instruments	-77	-2 187	-	-2 265
<b>Total financial liabilities</b>	<b>-77</b>	<b>-2 187</b>	<b>-</b>	<b>-2 265</b>
<b>NET FINANCIAL ASSETS AND LIABILITIES</b>	<b>278 614</b>	<b>38 652</b>	<b>34 549</b>	<b>351 815</b>

### Changes in Level 3

	Shares and participations, unlisted	Shares and participations, listed	Bonds and other fixed income investments
<b>Opening balance, 1/1/2018</b>	29 914	3 254	1 382
Realised and unrealised gains (+) or losses (-) in the income statement*	4 736	226	47
Purchases	1 955	872	1 023
Sales	-528	-901	-9
<b>CLOSING BALANCE, 31/12/2018</b>	<b>36 077</b>	<b>3 450</b>	<b>2 443</b>
*Of which, unrealised gains	4 495	150	47

	Shares and participations, unlisted	Shares and participations, listed	Bonds and other fixed income investments
<b>Opening balance, 1/1/2017</b>	25 814	2 959	845
Realised and unrealised gains (+) or losses (-) in the income statement*	3 134	261	-41
Purchases	2 042	925	1 794
Sales	-1 076	-891	-1 216
<b>CLOSING BALANCE, 31/12/2017</b>	<b>29 914</b>	<b>3 254</b>	<b>1 382</b>
*Of which, unrealised gains	2 897	193	-41

### **Level 1 Instruments with publicly quoted prices**

Financial instruments traded in an active market. A market is considered to be active if it has quoted prices that are regularly updated more frequently than once a week and if the prices used are unadjusted for settled trades in the market. Slightly less than 77% of AP4's investments are classified in this level.

### **Level 2 Valuation methods based on observable market data**

Financial instruments traded in a market that is not considered to be active, but where there are quoted prices that are unadjusted for trades, or observable input data that is updated regularly for indirect valuation using generally accepted models. At AP4 this category mainly includes market-quoted equity funds that are not considered to be active but where there is observable input data that is regularly updated for indirect valuation as well as OTC derivatives such as forward exchange contracts and interest rate swaps, but also fixed income instruments and funds containing interest-related instruments with low liquidity. OTC derivatives are valued using discount curves that are indirectly based on regularly updated observable input data that is interpolated or extrapolated to calculate non-observable interest rates. Input data for these interest rates that is used to discount the future cash flows of the instrument for valuation is updated regularly and is observable, though this does not apply for the interest rates. These instruments are therefore classified as Level 2.

### **Level 3 Valuation techniques based on non-observable market data**

Financial instruments that are valued using a significant amount of non-observable data or that cannot otherwise be classified as Level 1 or Level 2. This includes unlisted shares and shareholder loans in directly held real estate companies and unlisted shares in private equity firms. For private equity firms, the IPEV's principles are used as the main framework and include several valuation methods such as valuation based on actual transactions, multiples valuations, calculations of net asset value and discounted cash flows.

For holdings in directly owned real estate companies, the principles of IPD Svenskt Fastighetsindex are used as a framework, with two basic methods: the local market price method and the indirect return method (NPV approach). With the local market price method, the property holdings are compared with similar properties sold on the open market, while the indirect return method involves the use of discounted forecast future cash flows.

### **Sensitivity analysis**

According to IFRS a sensitivity analysis shall be presented using an alternative valuation for Level 3 assets. In terms of valuation methodology, an alternative valuation of these assets is associated with major difficulties. Generally speaking, for unlisted properties the yield requirement is of crucial importance, but assumptions about factors such as vacancies, operating costs, market and profit growth are also of great importance. For private equity firms, profit growth and the stock exchange's P/E multiple valuations are important. Level 3 valuations usually include a delay, which in a positive-trending market entail a conservative valuation.

A sensitivity analysis of Vasakronan, AP4's largest real estate holding, with a fair value of shares and participations of SEK 17.7 billion, i.e., just over 50% of unlisted shares in Level 3, has been performed by the property company. According to this analysis a change in required yield by +/- 0.25 percentage points would change the value of the shareholding in Vasakronan by approximately SEK -1.8/+2.0 billion.

For valuation of AP4's investments in private equity firms reported in unlisted shares, corresponding to SEK 4.7 billion, significant assumptions are made about valuation multiples and future cash flows. A changed assumption for the EV/EBITDA multiple by +/- 5% would result in a change in the valuation of these investments by SEK -/+ 589 million. Valuation of AP4's high-yield fixed income assets reported in listed shares, corresponding to SEK 4.2 billion, is based substantially on discount rates for interest income and repayment of loans. A change in the discount rate of +/- 1 percentage point for all maturities would result in a change in value by SEK -/+ 85 million.

## 20 Risks

### Business risks

Following is a description of AP4's principal risks, which consist of financial and operational risks.

### Operational risk

By operational risk is meant the "risk of loss resulting from inadequate or failed processes, human error, defective systems or external events". The definition includes legal risk. Examples of operational risks include conscious or unconscious mismanagement, which can be caused by substandard routines or instructions, inadequate systems, insufficient control and audit, and by criminal actions or external events.

The overall goal in managing operational risks is the achieve and maintain a good control culture and to reduce significant operational risks within the Fund.

### Established, Fund-wide process and methodology

Operational risks at AP4 are to be managed through an established Fund-wide process and methodology. This process includes process mapping, identification and valuation of risks, and shall be conducted for all identified processes. Key controls shall be in place for all material risks, which as far as possible reduces the likelihood of risks materialising or mitigates the consequences when undesirable events occur despite all. In the valuation of risks, existing key controls shall quality-assured to ensure they have the desired functionality and are effective.

As part of the operational risk management process it is especially important to evaluate change processes and their effects on the business. Operational risks are evaluated specifically in connection with the implementation of new products, system changes and organisational changes.

To minimise operational risks, a clear division of responsibilities and authorities shall be documented in written rules and instructions. Applicable processes and procedures shall ensure good internal control and be documented in relevant instructions.

### Responsibility and organisation

In the day-to-day activities all managers and employees shall maintain an awareness of risks in the business and their key controls, and act in such a way to ensure that the operations, assets or trust in the Fund among parties in the external operating environment are not jeopardised. Further, all units are responsible for ensuring that the daily operations meet the requirements for good internal control and allocate sufficient resources for this.

The operations, with the process owner as the responsible party, shall identify, assess and manage the risks in their respective areas of operation. IT & Risk is responsible for supporting and coordinating the management of operational risks in the entire Fund. This responsibility includes developing and providing expert and methodology support and following up, evaluating and developing the risk management process. In addition, IT & Risk is responsible for conducting a follow up at least once of year to ensure compliance with the joint risk management methodology for operational risks for all identified processes in the Fund. The

same applies for all identified material change processes, such as for the implementation of new products, system changes and organisational changes.

AP4's Legal unit is responsible for legal risk aspects of contracts and similar.

### Financial risks

Financial risks, consisting mainly of market, credit and liquidity risks, are monitored and controlled by the independent IT & Risk unit, which reports directly to the CEO and the Board of Directors. The goal of asset management is to only take positions that are expected to generate favourable returns within established risk mandates. Therefore, the main risks that AP4 exposes itself to should consist of transparent financial risks, and in such case predominantly market risks where there are good opportunities for forecast risk premiums.

### Market risks

Market risk is the risk that the value of an instrument will be negatively affected by variations in share prices, exchange rates or market interest rates. Since AP4's holdings consists mainly of listed instruments with daily pricing in liquid markets, there are good opportunities to regularly measure and report on market risks through both prognosticated and realised risk levels. AP4's goal is to hold a high proportion of listed equities and fixed income instruments.

### Share price risk

Share price risk refers to the expected variation in the market value of shares. Share price risk is managed through diversification across regions, countries and sectors.

### Interest rate risk

Only AP4's fixed income assets are included in the measurement of interest rate risk attributable to expected variations in the market value of the Fund's fixed income assets caused by nominal interest rate movements in bond markets. AP4 manages interest rate risk through diversification across regions and yield curves.

### Currency risk

Currency risk refers to expected variations in exchange rates for assets denominated in foreign currencies. Currency risk arises in connection with investments that are quoted in foreign currencies. The Swedish National Pension Insurance Funds Act limits the total currency exposure in the Fund to a maximum of 40 percentage points. AP4's investment policy determines the ultimate currency exposure for each major currency in the dynamic normal portfolio (DNP).

### Risk in investments

One way of calculating financial risk is to use the Value at Risk (VaR) metric. Value at Risk is defined as the maximum loss that can arise with a given probability during a given period of time. In the table below an analytical factor model is used for a 10-day period of time and 95% confidence level.

## 20 Cont Risks

Asset classes, 31/12/2018	VaR, ex-ante, holding period	Contribution volatility %, 12-month portfolio	VaR, ex-ante, holding period
	10 days	12-month portfolio	1 day <sup>2</sup>
Global equities <sup>1</sup>	3 299	3,5	1 292
Swedish equities	1 842	1,9	504
Global fixed income instruments <sup>1</sup>	-1	0,0	-5
Swedish fixed income instruments	-13	0,0	5
Real assets <sup>1</sup>	1 314	1,4	101
Currency and other	33	0,0	14
<b>TOTAL INVESTMENTS</b>	<b>6 474</b>	<b>6,8</b>	<b>1 911</b>

Asset management horizons, 31/12/2017	VaR, ex-ante, holding period	Contribution volatility %, 12-month portfolio	VaR, ex-ante, holding period
	10 days	12-month portfolio	1 day <sup>2</sup>
Equities	5 949	6,1	989
Fixed income instruments	-103	-0,1	8
Currency	221	0,2	281
Total, Normal portfolio	6 067	6,2	1 278
Strategic management	394	0,4	-12
Tactical management	686	0,7	-10
<b>TOTAL INVESTMENTS</b>	<b>7 240</b>	<b>7,5</b>	<b>1 255</b>
of which, passive management	93	0,1	

<sup>1</sup> Some of the Fund's strategic assets lack market quotations of asset prices with good periodicity or are also missing underlying holdings of an index. This makes it difficult to forecast the risks for these assets in a satisfactory manner in the Fund's risk system, Barra. AP4 has therefore chosen to use alternative listed securities as approximations for these holdings. Approximations have been used for a total of 16.4% of assets. Approximations have been made as follows: For real estate holdings, corresponding to 9.9%, shares in listed Swedish property companies have been used. For unlisted equities and high-yield fixed income instruments, corresponding to 2.3%, a European equity index and European high-yield index have been used, respectively. For externally managed equities in emerging markets, corresponding to 2.7%, an equity index for emerging markets has been used.

<sup>2</sup> To enable comparisons with AP1, AP2 and AP3, the Fund has also estimated VaR based on a one-day holding period, a 95% confidence level, and a data length of one year in which the observations are given equal weight. In this context a simulation method with historical return distribution has been used for the calculation.

The risk measure Value at Risk (VaR) is used to calculate financial risks. Value at Risk is defined as the maximum loss that can arise with a given probability over a given period of time. The table above uses a 10-day period and 95% confidence level, unless otherwise indicated.

### Currency exposure

31/12/2018	USD	HKD	JPY	GBP	KRW	TWD	Other	Total
Shares and participations	71 415	6 032	9 106	7 715	2 893	2 392	33 479	133 031
Bonds and other fixed income assets	37 784	0	0	6 435	0	0	26 977	71 196
Derivate instruments, excl. Currency derivative	12	0	0	0	0	0	-501	-489
Other receivables and liabilities, net	1 922	7	167	181	0	0	1 268	3 545
Currency derivatives	-83 032	0	-5 322	-10 645	0	0	-44 039	-143 038
<b>CURRENCY EXPOSURE, NET</b>	<b>28 101</b>	<b>6 038</b>	<b>3 952</b>	<b>3 686</b>	<b>2 893</b>	<b>2 392</b>	<b>17 184</b>	<b>64 246</b>

31/12/2017	USD	JPY	GBP	CAD	CHF	EUR	Other	Total
Shares and participations	94 136	11 447	8 390	4 438	3 934	19 121	2 581	144 045
Bonds and other fixed income assets	42 278	0	7 806	0	0	19 294	0	69 378
Derivate instruments, excl. Currency derivative	-68	0	0	0	0	224	0	155
Other receivables and liabilities, net	3 519	76	196	136	99	-688	188	3 525
Currency derivatives	-89 198	-6 562	-12 652	-2 452	-2 288	-36 846	-1 542	-151 540
<b>CURRENCY EXPOSURE, NET</b>	<b>50 666</b>	<b>4 960</b>	<b>3 739</b>	<b>2 122</b>	<b>1 744</b>	<b>1 104</b>	<b>1 227</b>	<b>65 563</b>

AP4 hedges its entire holding of foreign fixed income assets as well as parts of its foreign shareholdings using currency derivatives. AP4's currency exposure at year-end was 18.4% (18.4%). The Fund's currency exposure is shown in the table above.

## 20 Cont. Risks

### Credit risk

Credit risk refers to the risk that an issuer or counterparty cannot meet its payment obligations. Credit exposure refers to the value that is exposed to credit risk through agreements with counterparties or issuers. Credit exposure thus includes both issuer and counterparty exposures. Total credit risk is limited by the selection of the interest rate index in the normal portfolio and

limits per rating category. Credit risk per pool of issuers or issuer is restricted by limits which include both issuer and counterparty risk.

The CEO approves all counterparties with which the Fund can do business (in both standard and non-standard instruments). Further, when trading in OTC derivatives, ISDA and CSA agreements must exist for all large counterparties.

<u>Non-standardised derivatives</u>				
<b>Rating classes<sup>1</sup>, 31/12/2018, SEK m</b>	<b>Bonds<sup>2</sup>, exposure</b>	<b>Fair value<sup>2</sup></b>	<b>Collateral/security</b>	<b>Residual risk</b>
AAA	80 721	-	-	-
AA	6 057	529	388	917
A	2 688	1 793	134	1 927
BBB	23 999	0	8	8
BB	25	-	-	-
No rating <sup>3</sup>	1 723	-	-	-
<b>TOTAL CREDIT RISK EXPOSURE</b>	<b>115 214</b>	<b>2 323</b>	<b>530</b>	<b>2 853</b>

<u>Non-standardised derivatives</u>				
<b>Rating classes<sup>1</sup>, 31/12/2017, SEK m</b>	<b>Bonds<sup>2</sup>, exposure</b>	<b>Fair value<sup>2</sup></b>	<b>Collateral/security</b>	<b>Residual risk</b>
AAA	90 720	-	-	-
AA	14 046	59	227	286
A	3 656	395	220	614
BBB	1 775	10	134	145
BB	-	-	-	-
No rating <sup>3</sup>	1 995	-	-	-
<b>TOTAL CREDIT RISK EXPOSURE</b>	<b>112 192</b>	<b>464</b>	<b>581</b>	<b>1 045</b>

<sup>1</sup> The credit ratings presented here refer to an internal standard. For 2018 this standard is based on the rating assigned by the chosen rating agency (Moody's Analytics UK Ltd).

<sup>2</sup> Fair value, including accrued interest.

<sup>3</sup> Pertains to subordinated loans, bonds and shareholder loans in Alternative investments and Real estate.

### Management of derivatives

AP4 uses derivatives in most management mandates. Derivatives have several areas of use and purposes, where the most important are outlined below:

- Hedging of AP4's foreign investments, where derivatives are the only alternative
- Making index management more efficient, where derivatives are used to minimise transaction costs and simplify administration
- Making active management more efficient, where derivatives are used to minimise transaction costs and simplify administration as well as to enable positions to be taken that cannot be created using other instruments (short positions, volatility positions, and more)
- Regulating the strategic portfolio's risk with the help of strategic derivative positions

The use of derivatives is limited both in terms of the nominal underlying values and market risk. All derivative positions and associated risks are subject to daily position and risk monitoring.

The CEO approves all counterparties with which AP4 may do business regarding both standard and non-standard instruments.

Furthermore, when trading in OTC derivatives, ISDA (International Swaps and Derivatives Association) and CSA (Credit Support Annex) agreements must exist with all large counterparties. ISDA agreements refer to a standard agreements for regulating derivatives trading between two counterparties. CSA agreements refer to an annex to an ISDA agreement.

CSA agreements regulate how collateral is to be pledged as outstanding liabilities in the form of liquid funds or securities.

## 20 Cont. Risks

### Liquidity risk

Liquidity risk includes liquidity risk related to cash flows and liquidity risk in financial instruments.

Liquidity risk in a financial instrument consists of the risk that the instrument cannot be sold or can only be sold at a significantly lower price than the market quoted price. A large share of AP4's securities are immediately available for trading or lending. Illiquid financial instruments consist primarily of assets in unlisted companies and real estate. OTC derivatives and credit instruments may also become illiquid and/or show significant differences between the bid and ask prices from time to time.

Liquidity risk may also be high if large net payments are needed from the liabilities side, since the Fund has a payment obligation to the Swedish Pensions Agency. This makes it necessary to keep a large share of liquid assets.

At present AP4 makes monthly payments to the Swedish Pensions Agency that are relatively small in relation to existing capital, however, possible losses on currency forward contracts and equity index futures may be significant, and daily forecasts of liquidity in SEK and other currencies are to be prepared.

AP4's liquidity risk in financial instruments is limited by the Fund's investment universe as well as by limits for active risk combined with the choice of benchmark index for fixed income securities and listed equities. Further, the Swedish National Pension Funds Act limits liquidity risk, as it stipulates that a minimum of 30% of AP4's total market value must be invested in debt instruments with low credit and liquidity risk.

The Board's rules limit liquidity risk through specific guidelines for investments in interest-bearing assets and through careful monitoring of cash balances. AP4 invests a large share of the portfolio in listed equities and government bonds with good liquidity. Overall, liquidity risk in AP4 is considered to be low.

The table below provides a summary of AP4's liquidity risk according to the maturity structure. Bonds and fixed income instruments are stated at fair value, including accrued interest.

**Maturity structure, 31/12/2018, SEK m**

Term	< 1 yr	> 1 yr < 3 yrs	> 3 yrs < 5 yrs	> 5 yrs < 10 yrs	> 10 yrs	Total
Nominal government	4 150	25 152	18 089	8 629	5 265	61 285
Nominal corporate	1 687	14 066	28 573	8 345	1 258	53 929
<b>TOTAL</b>	<b>5 837</b>	<b>39 218</b>	<b>46 663</b>	<b>16 973</b>	<b>6 522</b>	<b>115 214</b>

**Maturity structure, 31/12/2017, SEK m**

Term	< 1 yr	> 1 yr < 3 yrs	> 3 yrs < 5 yrs	> 5 yrs < 10 yrs	> 10 yrs	Total
Nominal government	3 029	8 051	16 517	17 656	12 668	57 920
Nominal corporate	4 689	19 917	15 526	12 089	2 050	54 271
<b>TOTAL</b>	<b>7 718</b>	<b>27 968</b>	<b>32 043</b>	<b>29 745</b>	<b>14 718</b>	<b>112 192</b>

All liabilities have terms of less than one year except for a few currency options, forward exchange contracts and credit derivatives (credit default swaps), see Note 11.

However, the combined market value of these contracts is limited, and they have therefore been omitted from the table above.

## 21 Financial assets and liabilities that are netted on the balance sheet or subject to netting agreements

31/12/2018	Gross amount	Netted amount on balance sheet	Net amount on balance sheet	Amounts not netted on the balance sheet				Total on balance sheet
				Offsetting of financial instruments under agreement	Collateral received	Net amount after offsetting	Other <sup>1</sup>	
<b>ASSETS</b>								
Derivate instruments	4 806	-	4 806	1 340	366	3 100		4 806
Unliquidated receivables	4 475	4 473	2	-	-	2	1 016	1 018
<b>TOTAL</b>	<b>9 281</b>	<b>4 473</b>	<b>4 808</b>	<b>1 340</b>	<b>366</b>	<b>3 102</b>	<b>1 016</b>	<b>5 824</b>

31/12/2018	Gross amount	Netted amount on balance sheet	Net amount on balance sheet	Offsetting of financial instruments under agreement	Collateral received	Net amount after offsetting	Other <sup>1</sup>	Total on balance sheet
<b>LIABILITIES</b>								
Derivate instruments	1 659	-	1 659	1 340	294	25		1 659
Unliquidated receivables	4 475	4 473	2	-	-	2	464	466
<b>TOTAL</b>	<b>6 134</b>	<b>4 473</b>	<b>1 661</b>	<b>1 340</b>	<b>294</b>	<b>27</b>	<b>464</b>	<b>2 125</b>

31/12/2017	Gross amount	Netted amount on balance sheet	Net amount on balance sheet	Amounts not netted on the balance sheet				Total on balance sheet
				Offsetting of financial instruments under agreement	Collateral received	Net amount after offsetting	Other <sup>1</sup>	
<b>ASSETS</b>								
Derivate instruments	3 131	-	3 131	1 958	249	924	123	3 254
Unliquidated receivables	13 706	13 702	4	-	-	4	2 681	2 685
<b>TOTAL</b>	<b>16 837</b>	<b>13 702</b>	<b>3 135</b>	<b>1 958</b>	<b>249</b>	<b>928</b>	<b>2 804</b>	<b>5 939</b>
<b>LIABILITIES</b>								
Derivate instruments	2 188	-	2 188	1 958	222	8	77	2 265
Unliquidated receivables	13 708	13 702	6	-	-	6	4 128	4 134
<b>TOTAL</b>	<b>15 896</b>	<b>13 702</b>	<b>2 194</b>	<b>1 958</b>	<b>222</b>	<b>14</b>	<b>4 205</b>	<b>6 399</b>

<sup>1</sup> Other instruments on the balance sheet not subject to agreements that allow offsetting.

The table above shows financial assets and liabilities that are presented net on the balance sheet or that have rights associated with legally binding master agreements for offsetting or similar agreements. Financial assets and liabilities are recognised net on the balance sheet when AP4 has a legal right to net under normal business conditions and in the event of insolvency, and if there is an intention to settle net or sell the asset and settle the liability simultaneously. Financial assets and liabilities that are subject to legally binding master agreements on offsetting or similar agreements that are not presented net on the balance sheet are arrangements that usually come into force in the event of insolvency, but not under normal business conditions or for arrangements in which AP4 does not have the intention to liquidate positions simultaneously.

# Board of Directors' signatures

Stockholm, 20 February 2019

**Sarah McPhee**

Chair of the Board

**Lars Åberg**

Vice Chair

**Sven Hegelund**

**Stefan Lundbergh**

**Erica Sjölander**

**Katrin Stjernfeldt-Jammeh**

**Maj-Charlotte Wallin**

**Ingrid Werner**

**Göran Zettergren**

**Niklas Ekvall**

CEO

Our audit report was submitted on 20 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

## Report on the audit of the annual accounts

### *Opinion*

We have audited the annual accounts of AP4 for 2018. The Fund's annual accounts are included in the printed version of this document on pages 38-63.

In our opinion, the annual accounts have been prepared in accordance with the Swedish National Pension Funds Act (2000:192) and present fairly, in all material respects, the financial position of the Fourth AP Fund 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 AP4 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

This document includes other information than the financial statements. The other information comprises the pages 1-37 and 66-73. The Board of Directors and the Managing Director are responsible for the other information.

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.

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 Director's 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 AP4. We have also audited to determine if there are any criticisms, in general, as regards the Board of Director's and Managing Director's management of AP4 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 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 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 AP4 and for the administration of the Fund's activities of AP4. This includes, amongst other things, the on-going assessment of the AP4 Fund's financial situation and ensuring that the organisation of AP4 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 Director's 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 AP4 are managed in a satisfactory manner.

### *Auditor's responsibilities*

Our responsibility regarding the audit of the administration and, thereby, our opinion on discharge from liability, is to evaluate audit evidence in order to, with a reasonable degree of assurance on the basis of reasonable assurance, if there is any criticism of the Board of Directors' and Managing Directors' administration of the AP4 for financial year 2017.

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

As a part of an audit according to generally accepted auditing practice in Sweden, we exercise professional judgment and maintain a professional scepticism through the entire audit. The audit of the administration is based primarily on the audit of the accounts. Any additional audit procedures selected to be executed are based on our professional judgment with the starting point being the risks in the operations and the determined level of materiality. This implies that we focus the audit on such 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 AP4's situation. We review and test decisions taken, decision-making documentation, measures taken and other circumstances relevant to our opinion on the administration.

**Stockholm, 20 February 2019**

### **Helena Kaiser de Carolis**

Authorised Public Accountant

Appointed by the Swedish Government

### **Peter Nilsson**

Authorised Public Accountant

Appointed by the Swedish Government

# Fund governance report

**The fund governance report describes parts of the work conducted by the Board of Directors and AP4 during the year. The report complies with applicable parts of the Swedish Corporate Governance Code ("the Code"), which provides guidance for generally accepted practice for listed Swedish companies. However, AP4 is a government authority, and the differences between public law and company law are substantial. The fund governance report is therefore limited to the parts of the Code that can be regarded as relevant for AP4. The fund governance report has not been reviewed by AP4's external auditors.**

## Governance of AP4 – an authority governed by law

AP4 is a government authority whose operations are regulated by the National Pension Funds (the AP Funds) Act (Lagen (2000:192) om allmänna pensionfonder (AP-fonder)). The purport of this law is that AP4's capital may only be used by the state to fund income-related retirement pensions, unless Swedish Parliament decides otherwise. In accordance with National Pension Funds Act, the AP Funds each have their own, independent boards of directors, which are responsible for the organisation and administration of the Funds' capital. According to this Act, AP4's board and operations may not be steered by government directives nor by business policies or economic policy interests. On 1 January 2019, changed rules in the National Pension Funds Act took effect regarding the AP Funds' investment rules, including a stipulation for exemplary asset management. Following is a description of the rules that applied in 2018.

## AP4's mission

AP4's mission is to manage the Fund's assets to achieve maximum long-term returns and thus provide the greatest possible benefit

for the pension system. The environment and ethics are to be taken into account without compromising on the goal for maximum returns. In its work on achieving this mission, AP4 shall independently formulate goals and strategies.

## Investment rules

The investment rules for AP1-AP4 are stipulated in the National Pension Funds Act. Investments may be made in all market-listed and tradable instruments on the capital market, except for those related to commodities.

- A minimum of 30% of assets must be invested in fixed income securities with low credit and liquidity risk.
- A maximum of 40% of assets may be exposed to currency risk.
- A maximum of 10% of assets may be exposed to an individual issuer or group of issuers with internal ties.
- The market value of AP4's shares in listed Swedish companies may amount to a maximum of 2% of the respective companies' total market capitalisation.
- A maximum of 10% of votes may be owned in an individual listed company (except for own property companies).
- A maximum of 30% of votes may be owned in unlisted companies (private equity firms).
- A maximum of 5% of assets may be invested in unlisted securities.
- Unlisted shares may only be owned indirectly via funds or via private equity companies (except for shares in own property companies).
- Shares and participations in unlisted property companies may be directly owned.
- A minimum of 10% of assets must be invested by external asset managers.

## Review and evaluation

The AP Funds are reviewed by external auditors. The government adopts the AP Funds' income statements and balance sheets

yearly. Under assignment by the government the AP Funds' operations are also evaluated every year. This evaluation is presented in a written document that is submitted to Swedish Parliament.

## Audit of operations

AP4's auditors are appointed by the Swedish government. The current assignment for 2018 is held by Helena Kaiser de Carolis and Peter Nilsson, from PwC AB. This assignment applies until AP4's income statement and balance sheet for 2018 have been adopted and also includes a specific assignment for PwC AB to coordinate the audits of the AP Funds. The auditors issue an audit report on their review. The auditors report directly to the Board of Directors, in part via a written audit report and in part via an oral presentation. The auditors attend at least one board meeting per year. The auditors report yearly to the Ministry of Finance.

## External and internal rules and regulations

AP1-AP4 have jointly prepared accounting and valuation principles which aim to ensure that the AP Funds apply uniform accounting principles and that their annual reports are thereby comparable. The document is updated on a regular basis and is discussed yearly with the external auditors. Since 2012 the AP Funds have a joint policy for remuneration terms, employee benefits, entertainment and business travel that has been adopted by the respective AP Funds' boards. This joint, overarching policy is complemented by AP4's more detailed internal employee and ethics-related policies and guidelines.

### External and internal rules, regulations and documents that affect governance of the operations:

- The National Pension Funds (the AP Funds) Act (Lagen (2000:192) om allmänna pensionfonder (AP-fonder))
- Laws such as the Administrative Procedures Act, the Public Procurement Act, and the principle on public access to information
- Views from external auditors
- The government's evaluation and report to the Swedish Parliament
- The AP Funds' joint policy, and accounting and valuation principles
- AP4's internal policies and rules
- AP4's sustainability policy
- AP4's ownership policy
- The Swedish Code of Corporate Governance

## The Board's responsibility and duties

The Board of Directors is ultimately responsible for AP4's organisation and the administration of AP4's capital. The Board has delegated the responsibility for the day-to-day administration to the CEO. The Board is also responsible for hiring and evaluating the CEO, taking positions on overarching strategic issues, ensuring that its decisions are executed, and checking and following up that the operations and its risks are managed in a suitable manner.

### Important duties include adopting the following, among other things:

- Rules of Procedure for its work
- Policies, rules and guidelines for the operations, personnel (including principles for remuneration and terms of employment), financial and operational risks, and ethical guidelines for employees
- The focus of asset management through set return targets, the dynamic normal portfolio (DNP), and risk mandate for the day-to-day asset management
- The CEO's instructions
- A yearly business plan for AP4

## The Board's composition

AP4's board shall be made up of nine regular directors without deputies. The board members are appointed by the government. Of these, two are appointed based on a recommendation from the employer organisations and two are appointed based on a recommendation from the employee unions. The government appoints the Chair and Vice Chair from among the other board members who were not nominated by the labour market parties.

No changes were made to AP4's board in 2018. The board members on 31 December 2018 were Sarah McPhee (Chair), Lars Åberg (Vice Chair), Sven Hegelund, Stefan Lundbergh, Erica Sjölander, Katrin Stjernfeldt Jammeh, Maj-Charlotte Wallin, Ingrid Werner and Göran Zettergren. Biographical information on AP4's directors is provided on page 72. The Board appointments apply until AP4's balance sheet and income statement for 2018 have been adopted.

## The Board's three committees

The Board has established three committees — the Remuneration, Risk, and Audit Committees — which conduct drafting work on various matters for the Board.

### Remuneration Committee

The Remuneration Committee is tasked with conducting drafting work and advising the Board on remuneration matters concerning the CEO and senior executives. The committee also conducts drafting work on other matters concerning AP4's remuneration principles and other terms of employment for all employees. The Remuneration Committee is composed of three board members: Göran Zettergren (committee chair), Sven Hegelund and Maj-Charlotte Wallin.

### Risk Committee

The Risk Committee shall serve as a drafting, oversight and advisory body for the Board with respect to AP4's governance, monitoring, and reporting of financial risks in the operations. The Risk Committee is composed of four board members: Stefan Lundbergh (committee chair), Lars Åberg, Sven Hegelund and Ingrid Werner.

## Audit Committee

The Audit Committee is tasked with serving in a drafting, oversight and advisory role for the Board with respect to AP4's external financial reporting, accounting, external audit, monitoring of AP4's management of operational risks, and compliance. AP4's external auditors attend the meeting at which the final audit is addressed. The Audit Committee is composed of three board members: Maj-Charlotte Wallin (committee chair), Stefan Lundbergh and Erica Sjölander.

## Directors' fees

Directors' fees are set by the government. The full-year fee is SEK 100,000 for the Chair of the Board, SEK 75,000 for the Vice Chair, and SEK 50,000 for each of the other directors. The directors' fees have been unchanged since 2000. The government has also set a yearly budget of SEK 100,000 for committee assignments. The Board has decided to distribute the annual fee for committee work in the amount of SEK 10,000 per member, including the Chair of the Board.

## Board work in 2018

### Six meetings documented by minutes

During the 2018 financial year the Board held six meetings at which minutes were recorded. As shown in the table below, directors' attendance remained high, by an average of 94%. Attendance at board meetings included, in addition to the board members, the CEO, AP4 executives in a presenting role, and AP4's General Counsel, who also serves as company secretary.

## Board meetings in 2018

	Remuneration Committee	Risk Committee	Audit Committee	Attendance/total no. meetings	Fee (SEK 000s)
Sarah McPhee, Chair				6/6	100
Lars Åberg, vice Chair	X			6/6	85
Stefan Lundbergh	X	X		6/6	70
Erica Sjölander			X	5/6	60
Sven Hegelund	X	X		6/6	70
Maj-Charlotte Wallin	X		X	6/6	70
Göran Zettergren	X			6/6	60
Ingrid Werner		X		6/6	60
Katrin Stjernfeldt Jammeh				4/6	50

## Focus areas in 2018

In addition to its regular work areas, the focus of the Board's work in 2018 was mainly on decisions related to extensive development work during the year, including:

- Preparations ahead of implementation of the changed rules for the AP Funds, including more flexible investment rules and a new requirement for exemplary asset management
- ALM analysis
- The asset management structure, including long-term targets, the portfolio structure, and investment philosophy

## Evaluation of the Board's work

The Board's work is evaluated yearly. At the end of 2018 the Board conducted the annual evaluation of its work, in which all board members participated. The evaluation was conducted with the assistance of external consultants, after which the evaluation report served as documentation for a discussion within the Board on how its work can be further developed.

# Risk management at AP4

**Well balanced active risk-taking based on set level of risk is a central component in AP4's successful asset management.**

## Risk management in three steps

To achieve its set return targets, AP4 must take well balanced risks, and adept risk management is necessary for successful asset management. It must be possible to foresee risks prior to an investment and to subsequently control them. Risk management can be broken down into three steps:

- ① Risk governance
- ② Continuous risk management
- ③ Monitoring and control

### Step 1. Risk governance — framework for risk tolerance

The Board of Directors has overarching responsibility for AP4's operations and adopts an investment policy and risk management plan for AP4's operations every year. Together with the Swedish National Pension Funds (the AP Funds) Act (Lagen (2000:192) om allmänna pensionfonder (AP-fonder)), these governing documents provide the framework for AP4's risk tolerance.

To manage the various aspects of risk governance, the Board has established a Risk Committee and an Audit Committee with three board members each. The Risk Committee serves in an advisory, oversight and drafting role for the Board with respect to AP4's governance, monitoring and reporting of financial risks in the operations. The Audit Committee is tasked with overseeing the external financial reporting and the effectiveness of AP4's internal controls. Its duties include overseeing the work on monitoring management of operational risks and monitoring compliance.

AP4's risk and investment strategy has been formulated in accordance with the overall objective to generate the highest possible return over time and thereby contribute to the pension system's financial strength.

The investment policy describes, among other things, the focus of asset management based on return targets and the dynamic normal portfolio (DNP), which takes its starting point from AP4's ALM (Asset Liability Management) process. In addition, the investment policy describes the Fund's risk mandate for the continuing asset management.

The risk management plan describes the division of responsibility and authority for the investment operations, the principal risks in the business and how these risks are to be controlled and followed up. The main risks are financial and operational risks.

A more detailed description of risks is provided in Note 20.

### Step 2. Continuous risk management

AP4's daily risk management and control activities are decentralised to all operating aspects of the organisation and are conducted in accordance with the three lines of defence principle. This principle distinguishes between the functions that own the risks (the first

line of defence), functions for monitoring, control and compliance (the second line of defence), and functions for independent review (the third line of defence).

## Three lines of defence

In the first line of defence, all pertinent units have a responsibility for risk management and control for every business transaction. This includes every administrative unit in the investment operations as well as business support functions, such as Back Office, Finance and Legal.

The second line of defence consists of parts of the IT & Risk unit (Risk & Systems), Compliance and Finance (pertaining to control of rules surrounding authorisation rights). The Compliance function, Performance Analysis and Risk Control are independent functions from the investment operations that report directly to the CEO and Board of Directors.

The third line of defence rests with internal audit. Each year the Board decides on the extent and the areas for which internal audit is to be conducted. In 2018 an external accounting firm was hired through a tendering process for such an internal audit assignment.

## Financial and operational risks

In the continuing risks management, risks are broken down into financial and operational risks.

Financial risks consist mainly of market, credit and liquidity risks.

The CEO delegates the risk mandate received from the Board for financial risks to the various asset management units. The respective asset managers are responsible for risk management within their respective mandates. Risk management within a mandate is conducted through calculated risk-taking, which can have both positive and negative outcomes.

AP4's financial risks have their starting point in the Board's decision on the overall asset allocation in the dynamic normal portfolio (DNP) as well as in the Fund's risk mandate for the continuing asset management.

As documentation for AP4's continuing work on optimising risk-taking, risk forecasts are used for the respective asset management areas, instruments, risk factors, and so on. AP4 plans strategic risk-taking with the help of stress tests and various scenario analyses.

Operational risks at AP4 are to be managed through an established Fund-wide process and methodology. Key controls shall be in place for all material operational risks, which as far as possible reduce the likelihood of a risk materialising or mitigate the consequences when undesirable events occur despite all. In the day-to-day activities all managers and employees shall maintain an awareness of risks in the business and their key controls, and act in such a way to ensure that the operations, assets, and the trust of the surrounding world are not jeopardised.

### Step 3. Monitoring and control

The IT & Risk unit is responsible for developing the risk analysis and control process. This involves checks to ensure compliance in the operations with statutory investment rules, targets and guidelines, the requirements of the risk management plan and the CEO's decisions.

The IT & Risk unit's work includes closely measuring and analysing risk and returns as well as reporting on these daily, both in absolute figures and relative to benchmark indexes, and reporting any breaches of applicable rules or regulations. IT & Risk is organised into three different functions: Risks & Systems, Risk Control and IT. Of these, the Risk & Systems and Risk Control functions are part of AP4's risk management.

The Risks & Systems function is responsible for the valuation principles for all instruments as well as daily analysis, control and reporting of returns, risks (forecast and outcome), and risk-adjusted returns.

The Risk Control function is responsible for monitoring and control of financial risks – mainly credit and liquidity risks. The Risk Control function is also responsible for monitoring operational risks in the investment operations and for ensuring compliance with rules governing operational risks.

Operational risks in AP4 are to be managed through an established Fund-wide process and methodology. This process includes process

mapping, identification and valuation of risks, and shall be conducted for all identified processes at least yearly. Key controls shall be in place for all material risks, which as far as possible reduces the likelihood of risks materialising or mitigates the consequences when undesirable events occur despite all. In the valuation of risks, existing key controls shall quality-assured to ensure they have the desired functionality and are effective.

As part of the operational risk management process it is especially important to evaluate change processes and their effects on the operations. Operational risks are evaluated specifically in connection with the implementation of new products, system changes and organisational changes.

To minimise operational risks, a clear division of responsibilities and authorities shall be documented in written instructions. Applicable processes and routines shall ensure good internal control and be documented in relevant instructions. The so-called four-eyes principle is applied consistently.

The Compliance function reviews the operations with respect to compliance with laws, regulations and other guidelines, policies, instructions and internal rules, including ethical guidelines. Its responsibility includes providing support to the operations on compliance issues and analysing compliance risks in the operations.

## Remuneration at AP4

### **AP4's role as a manager of Swedish national pension funds requires that the remuneration levels for the Fund's employees, including the CEO, are reasonable, justifiable and explainable.**

In general AP4 strives to ensure that its employees' remuneration on the whole is in line with the market and enables AP4 to attract and retain talented employees. AP4 shall not be a salary leader, however.

### **AP4's board of directors**

AP4's board is responsible for addressing remuneration issues in a purposeful, responsible and transparent way. Each year the Board adopts the principles governing remuneration and other terms of employment for AP4's employees.

In addition, the Board conducts an annual follow-up of how these principles have been applied at AP4 during the preceding year, and verifies and certifies that the government's guidelines on terms of employment for senior executives of the AP Funds have been adhered to. As part of this work, with the support of external consultants the Board regularly conducts comparisons of AP4's remuneration levels for both members of the Executive

Management and other employees using salary statistics from relevant, comparable employers in the market.

### **Remuneration Committee**

The Remuneration Committee is a committee appointed by the Board and is composed of three members. The committee serves in an advisory, monitoring and drafting role for the Board for remuneration matters concerning the CEO and senior executives of AP4.

The Remuneration Committee conducts drafting work for important remuneration decisions in addition to handling other related duties delegated to it by the Board. The committee also conducts drafting work for other matters concerning AP4's remuneration principles and other terms of employment for all employees, and is responsible for monitoring application of these principles. Finally, the committee conducts drafting work behind the assessment of AP4's compliance with the government's guidelines for terms of employment for senior executives of the AP Funds.

### **The AP Funds' joint policy**

A joint policy for remuneration principles, employee benefits, entertainment and business travel for the First, Second, Third, Fourth, Sixth and Seventh AP Funds was formulated in 2012 and

was adopted by AP4's board. This joint, overarching policy is complemented by AP4's more detailed employee-related policies and guidelines, including AP4's remuneration policy. The policies and guidelines referred to above are subject to annual review.

### **AP4's remuneration policy**

According to AP4's remuneration policy, an employee's total remuneration consists of a fixed salary, variable salary, pension and other benefits. No variable salary is payable to the CEO, senior executives, the head of Risk Control and the Compliance officer.

### **Fixed salary**

Fixed salary shall be in line with the market and competitive, but not market-leading. Salaries are set on an individual basis and are commensurate with the level of responsibility and degree of difficulty of the work involved, as well as with the competence and capacity required for each employee's work.

### **Variable salary**

Each year the Board of Directors approves a plan for variable remuneration for all of AP4's employees. No variable salary is payable to the CEO, senior executives, the head of Risk Control or the Compliance Officer. The plan provides an opportunity to receive a maximum of two months' salary based on the achievement of predetermined targets based on objective criteria. The targets included in the plan are designed to balance collective achievements with the individual employees' contributions to and responsibility for AP4's overall performance during a rolling three-year period. A variable remuneration award is paid out only if AP4 posts a profit in absolute terms for year that the variable remuneration pertains to.

### **Pension**

AP4 applies the so-called BTP plan under applicable collective agreements with BAO (the Employers Organisation of Swedish Banking Institutions) and SACO (the Swedish Confederation of Professional Associations) for all employees except for the CEO. Employees hired after 1 April 2008 with salaries higher than 10 times the Income Base Amount receive Alternative BTP, a defined contribution pension solution whereby pension premiums are paid in an amount corresponding to 30% of the employee's salary that is higher than 7.5 times the Income Base Amount. For other employees, unless otherwise agreed a mainly defined benefit retirement pension applies, according to the BTP plan. The CEO is entitled to retirement at 65 years of age and receives pension provisions corresponding to 30% of his salary.

### **Salary exchange/enhanced occupational pension**

All employees are entitled to exchange a portion of their gross salary for pension contributions in way that is cost-neutral for AP4.

### **Other benefits**

The combined value of other benefits accounts for a limited value in relation to employees' total remuneration. Examples of other benefits include health insurance, group insurance and a fitness subsidy. AP4 has four parking spaces that the employees can use, for which they are taxed as an employment benefit.

### **Notice period/severance pay**

A notice period for end of employment applies in accordance with the rules of the collective agreement between BAO and SACO for all employees except for the CEO. For the CEO, a mutual notice period of six months applies. In the event AP4 serves notice, the CEO may also be entitled severance pay of 18 months' salary. Upon new employment or for income earned from an own business, the remuneration during the notice period or severance pay is to be reduced by an amount equivalent to the new income.

### **The Board's follow-up of salaries in 2018**

During the year, the Board commissioned a salary survey for all employees based on the guidelines of the Discrimination Act as well as an external market comparison.

The salary survey that was conducted from a gender equality perspective showed in summary that there are no significant differences in salary with respect to equal work, work of equal value, or in female-dominant work categories.

The external market comparison that was conducted covered all of AP4's employees including the Fund's senior executives. The market comparison was conducted of salaries for equivalent positions in the financial sector in Sweden working with long-term asset management.

One of the aims of the market comparison is to ensure that AP4's salaries are in line with the Fund's remuneration policy and the government's guidelines for terms of employment for senior executives of the AP Funds, and thus to ensure that AP4's remuneration levels are reasonable and justifiable without being market-leading, at the same time that they are in line with the market and competitive.

The comparison, analysis and compilation of the external market salary comparison were performed by the external consulting firm Willis Towers Watson, whereby the documentation was obtained from its annual salary and benefits survey for the financial sector in Sweden. Each employee's remuneration was compared with corresponding positions of a group of financial sector actors in Sweden that work with long-term asset management. These are judged to compete for personnel with corresponding responsibilities, experience and expertise required by AP4 to fulfil its mission.

After review of the comparative analysis results, the Board could conclude that AP4 applies remuneration levels that are within established guidelines and that AP4's salaries are competitive, reasonable and justifiable without being market-leading. In addition, it was determined that remuneration of senior executives is in accordance with the guidelines for terms of employment for senior executives of the AP Funds.

# Board of Directors

**AP4's board of directors consists of nine board members. All of the board members are appointed by the government. Of the Board's members, two are appointed based on a recommendation from the employees' unions and two are appointed based on a recommendation from the employers' organisations. The government appoints the Chairman from among the other board members.**



**Sarah McPhee**

Chair of the Board since 2016  
Born 1954

**Other assignments**

**Chair:** The Centre for Business and Policy Studies (SNS), Houdini AB  
**Director:** Klarna AB, Axel Johansson Inc., Bure Equity AB



**Lars Åberg**

Vice Chair since 2017  
Born 1953  
B.Sc. Econ.

**Other assignments**

**Director:** Trygg-Stiftelsen, Gamla Livförsäkringsaktiebolaget SEB TryggLiv



**Sven Hegelund**

Director since 2012  
Born 1947  
M. Pol. Sc

**Other assignments**

**Director:** Nordiska Investeringsbanken (NIB)



**Stefan Lundbergh**

Director since 2011  
Born 1968  
Ph.D.

**Other assignments**

**Director:** Cardano Insights



**Erica Sjölander**

Director since 2012  
Born 1971

**Other assignments**

Cabinet Secretary, Swedish Unions within Industry  
**Director:** Exportkreditnämnden (EKN)



**Katrin Stjernfeldt Jammeh**

Director since 2017  
Born 1974

**Other assignments**

Municipal board chair, City of Malmö  
**Chair:** Malmö Stadshus AB  
**Director:** Malmö Municipal Council, SKL, KPA  
Liv and Social Democrat Party Board



**Maj-Charlotte Wallin**

Director since 2014  
Born 1953

**Other assignments**

**Director:** Swedish Heart-Lung Foundation, Specialfastigheter AB



**Ingrid Werner**

Director since 2017  
Born 1961

**Other assignments**

Martin and Andrew Murrer  
Professor of Finance



**Göran Zettergren**

Director since 2015  
Born 1958  
Ec. lic.

**Other assignments**

Senior Economist, Confederation of Professional Employees (TCO)

**Chair:** Western Finance Association  
**Director:** American Finance Association, FINRA Economic Advisory Committee, Scientific Advisory Board för Swedish House of Finance (SHoF), Mistra Financial Systems (MFS) Board, Scientific Board för Danish Finance Institute

# Executive Management

**AP4's Executive Management is made up of eight persons.**



## Niklas Ekvall

CEO

Employed since 2016

Born 1963

Ph.D. Financial Economics, M.Sc.

Industrial Engineering

Previous positions include Nordea, Carnegie, AP3, Handelsbanken and Handelshögskolan.

### Director:

Vasakronan AB, Hans Dahlborgs Stiftelse för Bank- och Finansforskning and The Royal Swedish Academy of Sciences Investment Committee.



### Jenny Askfelt Ruud

Head of Alternative Investments  
Employed since 2018  
Born 1973  
M.Sc.Econ

Previous positions include Enwise, Ratos, McKinsey & Company, Arts Alliance and Morgan Stanley.



### Marcus Blomberg

Head of Strategic Allocation & Quantitative Analysis  
Employed since 2017  
Born 1974  
M.Sc. Eng., M.Sc. Econ., CFA

Previous positions include AMF, LF and Alfred Berg.



### Per Colleen

Head of Fundamental Equities  
Employed since 2013  
Born 1969  
B.Sc. Econ.

Previous positions include SEB, DnB, MGA and AP3.



### Tobias Fransson

Head of Strategy & Sustainability  
Employed since 2003  
Born 1968  
M.Sc. Econ.

Previous positions include ABB, SEB and Capto Financial Consulting.



### Helene Lundkvist

Head of Finance & Business Operations  
Employed since 2018  
Born 1966  
M.Sc.Econ.

Previous positions include Swedfund International, QleanAir Scandinavia, Deloitte Consulting and Deloitte Audit.



### Ulrika Malmberg Livijn

General Counsel  
Employed since 2009  
Born 1968  
LL.B.

Previous positions include business law firm Lindahl, law firm Setterwalls and Skandia Insurance Company Ltd.



### Nicklas Wikström

Head of IT & Risk  
Employed since 2008  
Born 1968  
M.Sc. in Accounting and Financing, CEFA, AFA

Previous positions include AFA Insurance.



The AP4 logo consists of a stylized 'A' and 'P' in teal, with the word 'FJÄRDE AP-FONDEN' in a smaller, sans-serif font below it.

AP4's long-term perspective, responsibility as owner and great commitment to sustainability create opportunities for high returns at a low cost. In this way AP4 works for more secure pensions.