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The Second AP Fund is one of

Northern Europe's largest pension funds and manages SEK 324.5

billion in virtually all asset classes and all around the world. The fund is a long-term and responsible asset manager that has an important mission – to minimise the effects on future pensions due to the release of the so called brake.

#### **Diversified portfolio creates strong results**

During the year, we also achieved the highest level ever of the Fund's managed capital, even though the payment to the pension system was the highest ever. 4

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#### 16 years as a service for pensioners

The portfolio, which the Fund was assigned in 2001, has seen major changes in the past 16 years, and it has been good for Sweden's pensioners.

#### Top risk activities

In the last year, the risk activities of the Second AP Fund have received very positive attention.

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

<sup>\*</sup> The Second AP Fund is officially translated as the Second Swedish National Pension Fund/AP2. In body text, for convenience, this is shortened to the Second AP Fund and, where space requires, AP2.

## The Second AP Fund

The Second AP Fund is one of five buffer funds within the Swedish pension system, tasked with maximising long-term return – and at low risk to pension disbursements. A committed asset manager, the Fund invests worldwide. Consistent and responsible fund management has helped ensure that the return generated on portfolio assets has exceeded the Fund's long-term commitments.

The buffer funds account for approximately 14 per cent of the Swedish national pension system's total assets. In conjunction with the other buffer funds, the Second AP Fund is tasked with contributing to maintaining as high and consistent pension levels as possible, even during periods affected by peaks in the number of retirees, or by an economic downturn. The Second AP Fund shall therefore adopt a long-term approach, with a view to securing the managed buffer capital over the long-term.

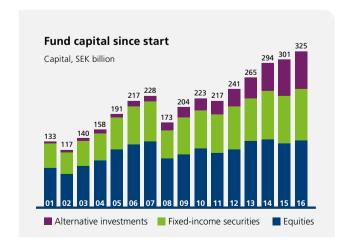
#### Strategic management model

The Fund's strategic management model is based on financial theory and incorporates long-term forecasts covering demographic, socio-economic and capital-market developments. The financial markets have been turbulent in the last 10–15 years. In this environment the Second AP Fund's return stands up well in absolute terms and compared to similar funds, seen in both a national and international perspective.

#### Efficient and sustainable portfolio management

The Second AP Fund is an attractive employer with 66 employees. It employs some of the foremost in their respective fields, as portfolio managers, analysts and other specialists. Together, this workforce ensures efficient portfolio management, 83 per cent of assets being managed in-house. One consequence has been that the Fund's management costs are lower than those of similar funds at an international level.

The Fund adopts an active approach to ethical, environmental and corporate governance issues, and has come far in making sustainability integral to portfolio management. Long-term investments require long-term, sustainable companies that provide a solid risk-adjusted return.





## 2016 in brief

Consequent to the Second AP Fund's strong performance over the year, return on investment exceeded the anticipated long-term return. In the past five years, the Fund's average annual real return has totalled 10.8 per cent and, over the past ten years, 4.7 percent. 2016 was a strong year primarily for the Fund's investments in shares and bonds in emerging markets. For the eighth year in succession the net inflows and outflows to the pension system were negative and the Fund has now paid out a total of just over SEK 36 billion in order to cover the current deficit in the pension system.

Fund capital

SEK 324.5 billion

The Fund's assets under management totalled SEK 324.5 (300.6) billion on 31 December 2016.

Net result

SEK 30.5 billion

The Fund posted a net result for the year of SEK 30.5 (11.7) billion.

Operating expenses

0.07 %

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

Net outflows to the national pension system

SEK -6.6 billion

Net outflows to the national pension system of SEK -6.6 (-4.9) billion.

Relative return

-0.4 %

The relative return on the total portfolio, excluding alternative investments and operating expenses, amounted to -0.4 (0.9) per cent.

Total return

10.5 %

The Fund's return on the total portfolio was 10.5. (4.1) per cent, excluding commission fees and operating expenses. Including these costs, the portfolio generated a return of 10.3 (4.0) per cent.

#### Five-year overview, financial key ratios

	2016	2015	2014	2013	2012
Fund capital, flows and results, SEK million					
Fund capital	324 522	300 624	293 907	264 712	241 454
Net outflows to national pension system	-6 637	-4 944	-5 120	-6 880	-3 788
Net result for the year	30 535	11 661	34 315	30 138	28 620
Return, %					
Return on total portfolio before commission fees and operating expenses	10.5	4.1	13.3	12.8	13.5
Return on total portfolio after commission fees and operating expenses	10.3	4.0	13.1	12.7	13.3
Annualised return after commission fees and operating expenses, five years	10.6	8.0	9.4	10.8	2.4
Annualised return after commission fees and operating expenses, ten years	5.5	5.7	7.1	7.0	7.4
Risk, %					
Standard deviation ex-post, total portfolio <sup>1</sup>	8.7	8.7	9.1	9.3	_
Standard deviation ex-post, daily market valued portfolio	7.2	8.9	5.7	5.7	6.4
Sharpe ratio ex-post, daily market valued (listed) portfolio	1.4	0.3	2.2	2.1	1.9
Sharpe ratio ex-post, total portfolio	1.9	0.5	2.6	2.4	2.0
Expense ratio as % of managed capital					
Expense ratio, cost incl commission fees, %	0.15	0.18	0.17	0.17	0.16
Expense ratio, operating expenses, %	0.07	0.07	0.07	0.07	0.07
FX exposure, %	31	30	24	23	20

<sup>&</sup>lt;sup>1</sup> Calculated on ten-year quarterly return.

#### Key figures sustainability

	2016	2015
The Second AP Fund's listed share portfolio		
The companies' absolute emissions of greenhouse gases (Scope 1 and 2) (tCO <sub>2</sub> e)	2 676 000	3 372 000
Carbon intensity related to the share of the companies' market value (tCO <sub>2</sub> e/SEK million)	20	25
Carbon intensity related to the share of the companies' turnover (tCO <sub>2</sub> e/SEK million)	24	29
The market value of the fund's portfolio covered by CO <sub>2</sub> e data (SEK million, 31/12/2016)	135 353	148 533
Business travel		
Proportion of train journeys between Gothenburg and Stockholm, %	84	85
Carbon dioxide emissions from:		
Rail, domestic, tonnes of CO₂e	0	0
Air, domestic, tonnes of CO <sub>2</sub> e	9	8
Air, abroad, tonnes of CO <sub>2</sub> e	199	171
Internal environmental indicators		
Electricity, kWh	114 300	127 500
Renewable electricity, %	100	100
Copying paper, purchased (A4), kg	755	820
Number of printouts	228 000	249 500
Other		
Female staff, %	33	34
Proportion of women in senior positions, %	35	38
Proportion of employees trained in hospitality and gifts, %	74	N/A
Proportion of employees trained in diversity, %	83	N/A

# Diversified portfolio creates strong results

In a turbulent world, the Second AP Fund generated strong results even in 2016. During the year, we also achieved the highest level ever of the Fund's managed capital, even though the payment to the pension system was the highest ever. Thanks to our strategy, culture and our employees, and through long-term efforts, we have been able to diversify the portfolio, which has generated a good net return for Sweden's pensioners during the Second AP Fund's first 16 years.

The question is whether or not 2016 will go down in history as one of the most tumultuous years to date. The results of the referenda in the UK and Italy, the American presidential election, and terrorist attacks in France and Turkey, among others, are examples of events that created concern and growing uncertainty in the financial markets as well.

The fact that we have managed to generate a net result of SEK 30.5 million in 2016 in these turbulent circumstances makes me proud. The net result for the year corresponds to a return of 10.3 per cent. In addition, in the past year we have been able to celebrate the fact that the fund capital achieved the highest level ever, SEK 324.5 billion, despite a record payment to the pension system which in 2016 amounted to SEK 6.6 billion.

#### A globally diversified portfolio

There are several explanations for our successful year. One of the most important reasons is our long-term strategic efforts to diversify the portfolio. Since the Second AP Fund was formed just over 16 years ago, we have worked gradually to spread the risks to the different markets and assets which do not correlate with each other to a great extent. Profit for the year shows that our globally diversified portfolio has generated solid results. All asset classes had a positive return in 2016, not least equities and bonds in emerging markets.

In our opinion, our diversified portfolio positively can continue to generate a good return for Sweden's pensioners. At the same time, we realise that the return levels we have historically had will become increasingly difficult to achieve with the applicable investment regulations for the AP Funds. One example is the

need to have at least 30 per cent holding in interest-bearing assets. With today's low interest rates, this means that we cannot expect the same high returns unless the investment regulations are adjusted.

#### Increased diversification in the real-estate portfolio

One of the events that I remember best from 2016 is the sale of our holdings in the real-estate company Norrporten. In addition to providing a good deal for Sweden's pensioners, I am satisfied with the sales process which our organisation managed very professionally.

Through the business, we will be able to continue working to diversify our real-estate portfolio in markets other than Sweden. For example, we have followed the Brazilian property market for a long time, and decided in 2016 to make our first investment in a real estate fund.

#### Eventful year in sustainability

Our vision at the Second AP Fund is to integrate sustainability in everything we do. Increased knowledge of these issues creates a broader basis on which to make decisions, which in turn results in better investment decisions. During the past year, I can confirm that we have done a lot in this important area.

During 2016 we implemented ESG factors (Environmental, Social and Governance) in the asset class global equities in the quantitative management, which comprises approximately SEK 90 billion of the Fund's capital. Most people choose to start with completed factors, but instead we use basic data to create our own ESG factors. In addition, we decided to include green bonds



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as part of the strategic portfolio, which represents an additional step in implementing sustainability issues in the portfolio management.

We also published a document on our approach to climate issues in order to clarify why we are working with these issues, what we are doing and how we are doing it. In addition, we continued to divest in assets where we identified financial climate risks. During 2016 we divested in 29 companies which, among other things, are active in fossil energy. We also began internal work to implement the UN Guiding Principles on Business and Human Rights, the so-called Ruggie principles. The work will continue in 2017 with a focus on compliance with the principles set out in the Fund's holdings.

Our annual study, Kvinnoindex (Female Index), showed that the proportion of women in senior positions in companies on the Nasdaq Stockholm continues to grow. For the first time the proportion of female board members exceeded 30 per cent. Our vision at the Second AP Fund is to integrate sustainability in everything we do. Increased knowledge of these issues creates a broader basis on which to make decisions, which in turn results in better investment decisions.

Based on the rate of change in the last few years, it can be stated that the companies are on track to achieve equal boards of directors and senior management groups. During 2016, we also invested in Women Entrepreneurs Opportunity Facility (WEOF) to promote female entrepreneurship in emerging economies by increasing the supply of capital for women entrepreneurs.

The fact that we have carried out active and successful work on sustainability for a long time is recognised internationally. We improved three places to number eight in the Asset Owners Disclosure Project ranking of the world's 500 biggest capital owners, where the ability to manage climate risks in the investments is assessed. Personally, I look forward to continue working with sustainability issues on a global level on the Board of Directors for the UN-supported Principles for Responsible Investment (PRI).

#### More focus on the net return

In recent years, we have focused on the internalisation process where a total of SEK 50 billion of the managed capital has been transferred from external to internal management. It is gratifying to be able to state that the internalisation has provided the cost efficiency we predicted. The Fund's total costs in relation to the managed capital are now at the lowest level, except for 2007. This is despite the fact that the portfolio has become increasingly complex with different asset classes in more and more markets.

International comparisons show that our costs are much lower than those of other large funds in the world. The annual comparison performed by CEM Benchmarking showed us that in 2015 we had 20 per cent lower costs than the global comparison group we belong to. Having said that, it is also important to make clear that we always have a focus on costs, and we will obviously continue to remain cost effective in the future. However, it is also important to set the costs relative to the size and the return of our managed capital.

The Fund's mission is to deliver a high return for Sweden's pensioners. It would be easy to select the strategy with the lowest costs, but that would not have generated the best return. Single-mindedly focusing on costs without placing them in relation to the return and the size of the managed capital would therefore be quite misleading. Our primary focus will always be to complete our mission in the best way, and therefore the net return is the best benchmark measurement.

#### Clear strategy, culture and employees

Our success depends on us having a clear strategy, a strong corporate culture and skilled and committed employees. Being part of a professional organisation and having the opportunity to work in one of Northern Europe's most advanced asset management firms provides inspiration for many. Our strong brand has contributed to our ability to recruit new skilled employees during the year.

Our strong corporate culture supports what we at the Second AP Fund are driven by – our work and our mission to maximise the return for Sweden's current and future pensioners. We are transparent in how we work, we have a clear moral compass and we always have the pensioners' best interests in mind. Through our strategy, culture and our employees, we will continue to provide world class management and a good return for Sweden's pensioners.

Eva Halvarsson, CEO



THE SWEDISH PENSION SYSTEM

# The Swedish pension system – a financially robust system

When the current Swedish national pension system was introduced in 2001, it heralded an entirely new structure and new responsibilities for the AP Funds. The Funds' role as a buffer within the pension system was defined. A direct correlation was established between the return on fund assets and growth in the value of the income-based pension.

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

#### A financially robust system

From a financial perspective, the Swedish pension system is robust, because the system is not allowed to be underfunded. If the economy fares well, with good growth and a high level of employment, the pensions increase in line with the salaries, adjusted for the so called norm in the pension system. If it fares less well, with fewer in work, there is a risk of activating automatic balancing in which case the pension growth will be lower than the salary trend until the balance in the system is restored.

The Swedish pension system has taken important steps to meet the challenges the population demographic poses. Sweden launched its new pension system sixteen years ago. This makes Sweden an interesting example for many countries in Europe and other parts of the world.

Since 2001, the Second AP Fund has built up capital assets totalling SEK 324.5 billion, making it one of northern Europe's largest pension funds.

#### Clear mission

The AP Funds are tasked with maximising long-term return on the pension assets under management, to ensure that the impact of automatic balancing on pensions will be as mild as possible. For the AP Funds, this objective is superior to the development of the management portfolio. A strong development in the national economy and the population demographic places less stringent demands on a high return in the AP Funds and vice versa. In all, the buffer funds account for approximately 14 per cent of total pension assets. The other 86 per cent derives from the combined value of contribution assets. These mirror the value of future pension contributions.

#### Balancing the system

The size of pension is determined by length of time worked and level of income, and how the mean rise in income has been. However, for pensions to be optimally adjusted upwards, the system must be in balance, with pension assets equal to or in excess of pension liabilities. Contribution assets and the AP Funds' combined capital assets shall at least equal accumulated pension liability. Where liabilities are greater than assets, automatic balancing is applied. This slows the upward adjustment of pensions. When the assets once again exceed the liabilities, there is a readjustment of the pensions to the level they would have been had the balancing not taken place.

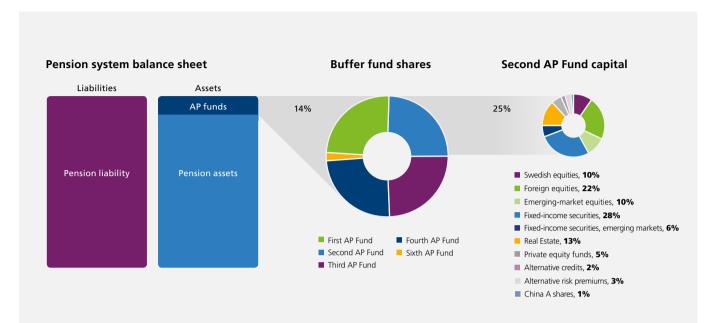
The increase in the value of the AP Funds' capital assets has helped prevent the need to apply the 'brake' for a number of years now. In 2008, however, the brake was applied in response to the sharp downturn experienced by global stock markets and the preceding years' upward adjustment of pensions and pension rights. Once applied, this impacted on pensions in 2010. The brake was applied yet again in 2009, in response to the sharp downturn in the economy and a rise in unemployment in the wake of the global financial crisis. Much of this braking effect has been regained in the last few years as the financial markets have recovered and the economy began to grow again.

#### Net outflows expected to continue

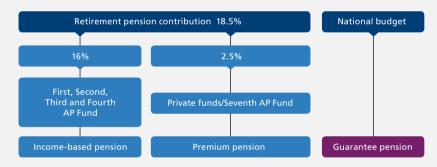
Public paid pension contributions are added to the Funds. All pension payments are taken from the Funds' capital. Since 2009, the Funds have paid out more in pensions than have been added to them. Large-scale retirements in the coming years mean that the net outflow is expected to continue for a long time. During 2016 the net outflow was SEK –6.6 billion, compared with SEK –4.9 billion in 2015.



For more information about the Swedish pension system, **www.pensionsmyndigheten.se** 

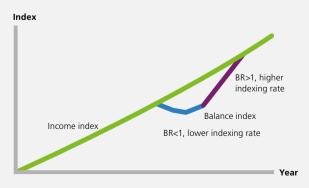


#### The Swedish pension system



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

#### Automatic balancing mechanism



The balance ratio (BR) represents the system's assets divided by combined pension liability. If the balance ratio is less than one, balancing is applied. This means that pension liability and pensions are adjusted upwards only by wage growth multiplied by the balance ratio. This process continues until parity is re-established. Once the balance ratio has regained a value in excess of 1, this triggers a more rapid upward adjustment in wage growth.

#### THE MISSION

## To act as a buffer fund

As a buffer fund, the Second AP Fund's long-term mission is to generate a high return on pension assets under management, with a view to promoting strong growth in pension assets and thereby contributing to parity in the pension system, even when economic and demographic factors are in a state of flux. This is stated clearly in the Swedish National Pension Funds Act.

The AP Funds' mandate includes maximisation of return while maintaining a low level of risk. The investment strategy shall make provision for the impact of pension disbursements as well as the liquidity requirement associated with outflows from the funds.

#### Mission and objective

The mission and objective, as described in the Act and its preliminary drafts, define clear principles that the AP Funds shall observe in managing their pension assets. The purpose of the Fund's investment activities, as determined by its Board of Directors, is to minimise the negative effect on pensions that would derive from applying the "brake". Based on an analysis in which portfolio choice is integrated with an assessment of how the pension system as a whole is likely to develop over the long term, the strategic portfolio selected will be the portfolio judged best able to contribute to achieving the defined investment objective.

The mission requires equal treatment of all generations, in compliance with the principle of "generation neutrality". For this reason, long-term commitments regarding return and risk, whether in relation to individual assets or the portfolio as a whole, are absolutely crucial when composing the strategic portfolio. Once finalised, the selected portfolio may be defined in terms of its asset allocation, anticipated return on investment and risk.

#### Purpose linked to pension system

The Second AP Fund's purpose is linked to the pension system and the anticipated effect of investment on pensions. As instructed, the Second AP Fund has composed a portfolio that, including active return, is expected to generate an average long-term real annual return of 4.5 per cent. The return may vary significantly over time.

In the past ten years, the Second AP Fund has generated a return of 73.9 per cent, corresponding to an average annual return of 5.7 per cent. Adjusted for inflation, this corresponds to an annual real return of 4.7 per cent.

#### Value-generation strategy

The Second AP Fund's strategy is based on a step-by-step approach to value generation: choice of strategic asset allocation, selection of index and active management. This approach is based on a set of principles, or Investment Beliefs. These describe the Fund's view of how capital markets function and the opportunities and potential they present for generating a return on investment.

#### Strategic asset allocation

The Second AP Fund's strategic portfolio is determined with the support of an in-house developed Asset Liability Model (ALM), which takes into account long-term developments in the pension system and on financial markets. This ensures that the mix of different asset classes that comprise the strategic portfolio represents those investments the Fund considers offer the best generation neutral, long-term growth prospects for future pensions.

#### Benchmark index

The Second AP Fund considers the choice of index to be part of the strategic investment process, where the index determines the investments selected for subsequent portfolio management, in-house and external. The Fund complements the broad and traditional cap-weighted indices with specialised indices, which in a more risk effective way is expected to contribute to the future return.

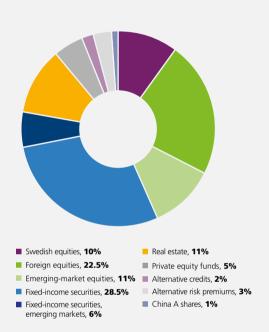


More about the Fund's management strategy at  $\boldsymbol{www.ap2.se}$ 

## Asset allocation, Swedish national pension system

# ■ Contribution assets **86%**■ Equities, **6%**■ Credit bonds, **1%**

## The Second AP Fund's strategic portfolio 2016 (% of Fund capital)



The pie chart on the right shows the allocation of assets in the Second AP Fund's 2016 strategic portfolio. The pie chart on the left shows the same allocation of assets, taking into account that the AP Funds answer for approximately 14 per cent of the system's combined assets. The remaining 86 per cent of the pension system assets are therefore in no way exposed to the financial markets.

Source: The Swedish Pensions Agency and its own calculations.

#### Second AP Fund value creation, %



<sup>&</sup>lt;sup>1</sup> Contribution from alternative investments 0.9 per cent and from market-listed portfolio 7.9 per cent.

#### Accumulated return, since start, %



<sup>&</sup>lt;sup>2</sup> Market-listed assets.

#### **STRATEGY**

# Long-term investment strategy

The AP Funds' portfolio management activities have made a positive contribution to the national pension system and the trend in pensions. Since its inauguration, the Second AP Fund's chosen management strategy has generated SEK 206 billion. During 2016, the Fund implemented some changes to the strategic portfolio with a view to increasing risk-adjusted return. The Fund has increased the allocation to non-listed assets and foreign corporate bonds. A strategic allocation of green bonds have also been started.

Over time, the Second AP Fund believes that around 90 per cent of the return on invested assets will derive from the composition of the strategic portfolio, the remaining 10 per cent from active management.

The annual return on the Fund's portfolio has amounted to 5.9 per cent per year since the buffer funds were started.

#### ALM model developed in-house

To determine how the pension system is likely to develop in the long-term, and how the Fund's selection of portfolio assets affects its balance, the Second AP Fund employs an Asset Liability Model (ALM). Developed in-house, this model includes assumptions about demographic and general economic development, as well as long-term prospects on the financial markets. The work with the ALM model is designed to create a portfolio that will minimise the impact of the automatic balancing mechanism on future pensions. The model's analytical horizon is 30–35 years.

The ALM model comprises three interlinked components:

- Scenario simulation: This component simulates various growth trajectories, including trajectories for the asset classes in the Fund's portfolio, for Swedish inflation, for the capacity utilisation rate and for salaries. Greatly simplified, the model consists of one part that describes the average anticipated growth of these variables and another part that describes numerous possible variations from this average.
- Calculation of the pension system's balance sheets and income statements: This component calculates the key ratios that are critical to pension system growth.
- Optimisation component: This component identifies the portfolio that best meets the overall objective. This is based on the other components of the ALM model. The ALM model's most important key ratio is the balance ratio (the ratio between assets and pension liabilities).

#### Controlled risk

An important factor governing the composition of the strategic portfolio is the fact that the AP Funds jointly only account for approximately 14 per cent of the national pension system's combined assets. The largest part (86 per cent) derives from the contribution assets, which can best be compared to index-linked bonds. This means that the AP Funds can and should accept a higher degree of financial market risk in their portfolios. The pension system in its entirety has a very limited exposure to risk in the financial markets.

A degree of controlled risk is necessary to be able to meet the targeted return. This is why the Second AP Fund has invested in for example equities and credit bonds, which offer potentially higher returns although incurring a higher risk compared to securities such as government bonds.

#### Long-term diversification of investment strategy

The Second AP Fund's long-term investment strategy and strategic portfolio have been subject to constant development from the start. A cornerstone of this process is to increase the spread of risk without compromising the potential future return. In 2007, the Fund intensified its efforts to achieve the long-term diversification of its investment strategy and primarily reduce its concentration on mature equity markets.

This took place by introducing asset classes and strategies that fall outside traditional investment sectors. This change of course in investment strategy is long-term and has taken several years to develop.

#### Changes in the strategic portfolio

In 2016, the Second AP Fund's Board of Directors made several decisions concerning the strategic portfolio and its composition.

Increased allocation to non-listed assets

As a consequence of the increased volume of investment, the Fund's strategic allocation to certain non-listed assets was expanded during the year. The continued build-up of the Fund's portfolios of non-listed real estate increased the weighting of these investments to eleven per cent. Both foreign traditional real estate (four per cent) and timberland and farmland assets (three per cent) increased their shares of the strategic portfolio. Sales of the Swedish real-estate company Norrporten, represents at the same time a reduced allocation share to Swedish properties (four per cent).

Increased allocation to foreign corporate bonds

After an increased interest rate difference between corporate bonds and state bonds in 2015, the strategic allocation for foreign corporate bonds increased by 3.5 percentage points. Low interest rates in Swedish bonds motivated a corresponding reduction of their strategic allocation weighting.

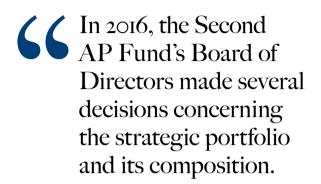
Green bonds new strategic asset class

During the year, green bonds were introduced as a separate asset class in the Fund's strategic portfolio. The Fund already had green bonds in its portfolios, but the investment volume has now become high enough to justify its own allocation. A specific allocation also signals the Fund's perception that green bonds have a particular role to play in the long-term investment strategy and that additional investments may be prioritised.

#### Choice of index

The index determines the investment choice within an asset class, thereby affecting the return the Second AP Fund is able to generate over the long term. The choice of benchmark index is therefore integral to the strategic portfolio management process and the strategic portfolio.

Since 2003, the Second AP Fund has chosen to use a variety of specialised indices that differ from the traditional cap-weighted indices. This is because a cap-weighted portfolio tends to award a higher weighting to those individual equities with the highest valuation, sometimes reflecting the fact that the share may be overvalued, and vice versa.



For this reason, the Fund therefore bases the composition of its portfolio partly on other weighting methods. Examples of such methods include the equal weighting of Swedish companies in various size categories, GDP weighting of countries and weighting based on fundamental corporate factors (such as sales, dividend and profits) in the foreign equities portfolio and the selection of indices based on low risk. This is expected to lead to less portfolio concentration and a higher risk-adjusted return over time.

#### **Active management**

Active management is based on the assumption that market inefficiencies exist and that there are a number of assets that are wrongly priced. By identifying these and utilising the Fund's resilience, active portfolio managers can increase the return compared with portfolio management that is entirely index driven. For this reason, the Second AP Fund employs active elements in its portfolio management. This active management is employed both in-house and via external managers.

In the last five years, the average active management has generated 0.6 per cent, which in total is equivalent to SEK 5.7 billion.

#### In-house portfolio management

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

The following asset classes are managed in-house:

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

The active management of Swedish equities during 2016 was conducted under three mandates. Swedish and foreign fixed-income securities are also actively managed in-house, together with emerging-market bonds. Foreign equities, global credit bonds and Swedish fixed-income securities are quantitatively managed too, involving the use of mathematical models to locate market inefficiencies.

#### **External portfolio management**

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

During 2016, the Second AP Fund employed external managers for the following areas:

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

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

Benchmark index for the	strategic portfolio, 31 December 2016	Index
Equities	Sweden	SBX: Stockholm Stock Exchange Benchmark Index SEW: "Equal Weighted Sweden Index" CSRX: "Carnegie Small Cap Return Index"
	Foreign equities	MSCI World GDP Weighted <sup>1</sup> , MSCI World <sup>1</sup> , MSCI World Minimum Volatility Weighted <sup>1</sup> , MSCI World Value Weighted <sup>1</sup> , MSCI World Risk Weighted <sup>1</sup>
	Emerging markets	MSCI Emerging Markets <sup>1</sup> , MSCI Emerging Market Value Weighted <sup>1</sup>
Fixed-income assets	Swedish nominal fixed-income	SHB Swedish All Bond <sup>4</sup>
	Global government bonds	Barclays Global Government <sup>2</sup>
	Global credit bonds	Barclays Global Credit <sup>5</sup>
	Government bonds in emerging markets	JP Morgan EMBIGD and JP Morgan GBI-EM Global Div <sup>3</sup>
	Global green bonds	Barclays MSCI Green Bond Index
Alternative investments	Swedish real estate	SFIX Svenskt Fastighetsindex
	Foreign real estate	7 per cent
	Timberland and farmland	8 per cent
	Private equity	MSCI World Local currency + 3 per cent
	Alternative credits	Barclays Global Government <sup>2</sup> + 4 per cent
	Alternative risk premiums	MSCI World Local currency
	China A shares	MSCI, China A <sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Adjusted index: adjusted after excluded companies and tax levels.

<sup>&</sup>lt;sup>2</sup> Adjusted index: excluding Japan and emerging countries as per MSCI.

<sup>&</sup>lt;sup>3</sup> Adjusted index: weighting of individual countries may not exceed 15 per cent and they may not have a credit rating lower than BBB (except for Brazil).

<sup>&</sup>lt;sup>4</sup> Adjusted index: excluding bonds with a maturity of more than 20 years, and Kommuninvest.

<sup>&</sup>lt;sup>5</sup> Adjusted index: excluding Japan and emerging countries as per MŚCI, as well as markets where issued volume is less than USD 500 million.



**MACRO** 

# Behind unlikely election results

2016 may go down in history as the year in which what people believed was impossible not only seemed to be possible, but also happened. Against the background of the unlikely election results, the economic recovery continued around the world, most evidently in emerging countries. The majority of central banks continued with stimulating monetary policies, while at the same time inflation and commodity prices appeared to have reached rock bottom.

#### More balanced growth

After a relatively weak economy in many emerging countries in 2015, growth began to recover in 2016. However, the economy continued to rise at a more moderate pace in developed countries, compared with the year before.

Of the major emerging countries, the trend in China was relatively stable while the Indian economy performed strongly. The biggest change from a growth perspective took place in Russia. Its economy recovered relatively well after a recession in 2015, in the wake of the low oil price.



Both the referendum in the UK and the presidential election in the United States went against what the opinion polls and experts predicted.

The trend in Brazil continued to be characterised by the ongoing bribery and corruption case in Petrobras. This led among other things, to the resignation of president, Dilma Rousseff. Her successor, Michel Temer, began an ambitious programme of reform. The recession in the Brazilian economy continued, but gradually to a smaller extent than in 2015.

Among the developed countries, the US economy experienced relatively muted growth at the beginning of 2016, with weaknesses in both the retail and industrial sectors. Both sectors recovered, benefiting from the improving labour market. The improved labour market was also the main driver of US growth. It created an average of almost 180 000 new jobs every month. Towards the end of the year, wages rose more than before, which is a sign that the labour market is starting to approach full employment.

The economic situation in Europe was relatively stable in 2016 and unemployment rates continued to fall. The growth continued to be supported by low key interest rates and quantitative easing from the European Central Bank, the ECB, which also increased the stimulation measures at the beginning of the year. A degree of concern spread after the British voted to leave the EU, but the European economy is significantly less dependent on the development of the UK economy than vice versa.

The Swedish economy continued to grow very strongly. Many sectors in the Swedish economy are going at full speed and several industries have difficulty recruiting employees. It is evident, for example, in the construction sector where a high proportion of construction companies indicate that the labour shortage is the main obstacle to increasing construction. An important reason for the strong development is the Riksbank's stimulating monetary policy. The Bank lowered its key interest rate at the beginning of the year and followed in the footsteps of the ECB by extending quantitative easing during the spring.

#### Inflation has turned

After several years of globally low inflation, it now appears to have reached the rock bottom. An important reason is that the commodity prices went up at the end of 2015. At the beginning of 2016 the price of crude also reached the bottom but has risen relatively sharply since then. As the economy improved in emerging countries, the demand for raw materials has also risen, which in turn has helped to raise prices. It remains to be seen whether this will mean that the central banks stop reducing their key interest rates, as it takes a relatively long time for changes in commodity prices to be felt in all stages.

#### When opinion polls and experts get it wrong

The outcome in both the referendum in the UK on the country's membership of the EU (Brexit), and the presidential election in the United States went against what opinion polls and experts predicted. There seems to be a common thread between Brexit.

Trump's victory and a wider populist upsurge in many countries. The financial consequences of the unexpected election outcomes in the USA and UK remain to be seen.

#### Economic effects and continued electoral focus in 2017

Regarding the UK there is a lot indicating that the effects will be clearly negative for a number of years to come. The main reason is that cooperation and trade agreements have historically always paid off. The trade agreements will not be as advantageous as they are currently for the Brits, at least not with the EU, and will also take several years to negotiate. Initially, the UK economy performed significantly better than expected, but the effects such as anticipated decreased investments – and thereby reduced need for labour – have not yet had any impact.

In the United States, there is the chance that the economy will benefit from fiscal stimulation measures and reduced taxes, at least over the next year. At the same time, it is uncertain to what extent the increased protectionism, which has been Trump's message, will be carried out. It is now clear that no new wider trade agreements will be signed. However, it is more uncertain whether old agreements will be torn up and concluded again. Increased trade restrictions are worse for growth in the longer term and will, if they happen, dampen the positive growth contribution from reduced taxes and fiscal stimulation incentives. In the longer term, the United States, which even before the increased fiscal stimulant incentives become reality already has

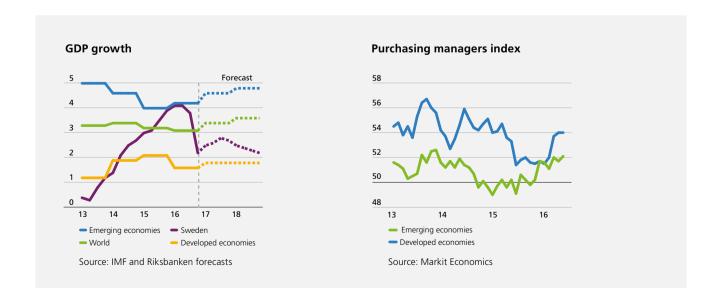
a growing budget deficit, needs to manage its budget policy to ensure the government debt does not grow too strongly and affect the country's credit rating.

In 2017 there will also be several important elections, including presidential elections in France and elections for the Bundestag in Germany.

In China, parts of the government, the so-called Politburo, will be replaced during the autumn when the country's 19th national congress will be held. Ahead of the congress, there is every reason to believe that the sitting government, with President Xi Jinping in charge, will continue to support the economy with additional stimulus incentives if these are considered necessary. The rate of growth is also expected to remain close to approximately 6.5 per cent as the Chinese government predicts.

The economic recovery is expected to continue at a relatively good pace in many countries. In light of developments in Brazil and Russia, as previously described, there are many indications that both countries will come out of recession in early 2017. Accordingly, the recovery will probably also continue in emerging markets.

If inflation really has bottomed out, the central banks in general will start to reduce the stimulation measures. The first of the major countries was the American Federal Reserve, which increased the key interest rate at the end of 2016 and is expected to increase two to three times in 2017.



# 16 years as a service for pensioners

The Second AP Fund's mission has not changed since it started in 2001. The portfolio, which the Fund was assigned, has seen major changes in the past 16 years, and it has been good for Sweden's pensioners. The development towards a more diversified portfolio has provided a higher and more stable return.

The Second AP Fund's Chief Investment Strategist, Tomas Franzén, has been an employee of the Fund since it was established. One of his work tasks over the years has been to drive the process with changes in the Fund's strategic portfolio, i.e., the composition of different asset classes which the Second AP Fund manages. After 16 years of work developing the Fund's portfolio, it is now time to close the books of the impact that the changes had on the return and therefore the amount of managed pension capital.

"At the start, the Fund was assigned a portfolio, not money. When we compare the original portfolio with what we have today, one can confirm that we have performed extensive changes. Today's portfolio is significantly more advanced and diversified," explains Tomas Franzén.

#### Wide trends in the investment strategy Listed Unlisted **Developed Emerging** Sweden Global Low risk **Higher risk** Liquidity Illiquidity Market weighted **Alternative index External** Internal

#### More unlisted and emerging markets

The portfolio which the Second AP Fund was assigned in 2001 consisted of almost three-quarters of bonds. In 2016, this asset class amounted to just over one third. In addition, at the start the portfolio contained virtually only Swedish assets while a significant part now consists of investments in other developed and emerging markets, such as China A shares, in which the Second AP Fund is the sole Swedish institution to invest directly. The share of Swedish assets in the portfolio has decreased from 97 per cent in 2001 to 26 per cent in 2016.

A further change that has taken place is, that the Fund's portfolio, which from the beginning contained only liquid assets, now contains a significant proportion of illiquid assets, where the transaction costs, measured in money and time, can be significant. They are therefore intended to be retained for many years. Among the illiquid assets in the portfolio are private equity funds, conventional real estate, as well as timberland and farmland. The advantage of these illiquid assets is that they diversify the portfolio, i.e., they contribute to increased spread of risk. In several cases, they also provide a higher return.

#### **Alternative indices**

At the start, all of the Fund's asset classes were managed against traditional capital weighted benchmark indices, i.e., an index in which the component securities' weighting was based on its market value. The Second AP Fund now uses a palette of different methods to design its benchmark indices. The weighting of a share may be determined, for example, by its value in relation to various key ratios or how much a risk this is in its return. The Fund uses equal weighting of equities in different size segments. By using these alternative indices, the portfolio will deliver a better return in relation to the risk.

#### Increased internal management

Another change is that the Second AP Fund currently manages significantly more of the holding internally than externally, which was the case in the beginning. The majority of the listed assets, which amount to around three quarters of the portfolio, are

today managed internally. This is a result of the internalisation process which the fund performed in the last few years.

#### Higher return at lower risk

Another part of the portfolio's change in the last 16 years is that the Second AP Fund has gone from investing in assets that have low risk, for example, Swedish bonds, to higher risk assets, such as shares in emerging markets. However, this does not mean that the total risk has increased, the opposite in fact. The changes in the portfolio have meant that the different sub-portfolios now show lower covariance as they have different return patterns. As a result, the increased diversification in the Fund's portfolio as a whole means a lower risk today compared with at the start.

The changes in the portfolio have contributed to a better return. A traditional portfolio with the Second AP Fund's risk profile would have generated a six per cent annual return over the past decade. The more diversified portfolio that the Fund has built up has generated just over seven per cent per year. The changes have also resulted in smaller portfolio risk and thus a more stable return. A higher and more stable return makes a positive contribution to the pensions by reducing the risk of applying the "brake".

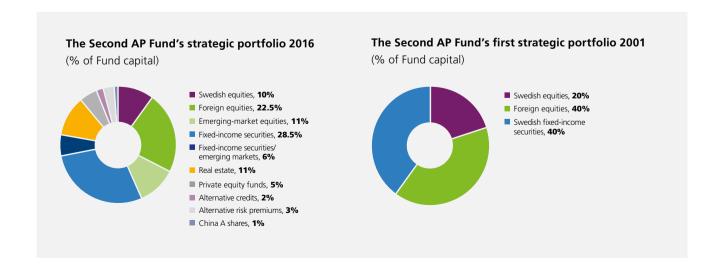
"The changes in the portfolio have been made based on our mission to contribute to higher pensions. Therefore, it is pleasing to be able to state that the development towards today's widely diversified portfolio provides a substantially higher return at a lower risk," says Tomas Franzén.

#### Want even more in the future

During its first 16 years, the Second AP Fund has been developed in many areas. Among other things, the entire risk and results follow up process has been built from scratch. There is now a major focus on sustainability, something that affects all of the Fund's assets. ESG factors are integrated successively in the management of all asset classes and during the year the quantitative management has made great progress in this area.

One could say retrospectively that the changes that have been carried out have been successful. The conditions for continuing this development in the future depend greatly on the AP Funds' investment regulations. The ability to invest a higher proportion of the portfolio in unlisted assets, and in direct investments, are examples of desirable changes. The Second AP Fund has on several occasions been forced to refrain from interesting investments such as these due to the current investment regulations. In addition, there is the requirement for at least 30 per cent holding in interest investments, which is not optimal for the return in the low interest rate environment that is expected to continue the coming years.

"At the Second AP Fund we have, in a relatively short time, done much that we can be proud of. The portfolio's development during the first 16 years is one example. However, it is important to always look forward to identify continued improvements. Adjusted investment regulations would allow us to do even more and provide an even better return for Sweden's pensioners," concludes Tomas Franzén.



# Sustainability important in investment decisions

In 2016, the Second AP Fund implemented ESG factors in the quantitative management. A wider basis for decisions allows for better investment decisions, which provides a higher return for Sweden's pensioners. Engaging in these matters at an early stage means clear benefits.

Of the Second AP Fund's total portfolio of SEK 324.5 billion, the quantitative management amounts to approximately SEK 140 billion, the Fund's largest single portfolio. This portfolio management makes investment decisions based on a quantitative model developed inhouse by the Fund. Within the asset class global equities, where a total of approximately SEK 90 billion is managed, the Second AP Fund implemented ESG factors into the model in 2016.

Model that will generate excess return

The mission for the asset class global equities within the quantitative management is based on two parts. One of these is to manage the capital in both developed and emerging markets based on six different indices. The other is to deviate from these indices in order to generate an excess return, i.e. creating a return that is better than the index.

"Our job is to look into the future and invest where we get the best return. In companies that can be expected to have a good development in the future, we want to take a position where the shareholdings are greater than the company's share of the index. These decisions require an idea of which companies we must have an overweight and an underweight in, and why we should have this," explains Claes Ekman, Quantitative Portfolio Manager at the Second AP Fund.

In order to identify the shares to be overweighted or underweighted, the Second AP Fund has developed a model for the quantitative management. For the asset class global equities, the model includes a great deal of information about approximately 2 500 companies. Basic data for the model, in the form of hundreds of different factors that are believed to have a link with the development of the shares, come from different suppliers.

This information is then processed by the Fund for 10–15 aggregated factors in the quantitative model. Predictions (forecasts about future unknown values) about the future return of the equities are then made based on these factors. These in turn form the basis for which equities the Second AP Fund will overweight and underweight in order to generate a better return than the index.

#### Implementation of ESG in the model

The Second AP Fund continuously reviews the quantitative model, which, among other things, can result in removing or adding certain factors. During 2016, ESG factors were added to the model for the quantitative management, a task that was carried out by the Second AP Fund's employees. The work started with the fund analysing basic data on the basis of the quantitative management's mission and work, i.e. trying to identify the equities that will generate excess and shortfall returns. The basic data needed to have an extensive history with information from many companies and to be delivered in a structured format.

"In the Second AP Fund's model, the companies are analysed based on ESG factors within two equally important areas. One consists of a classification of the companies based on their level of carbon dioxide emissions, for example. The second is made up of the change, i.e. the companies' development in terms of the amount of carbon dioxide emissions," explains Tomas Morsing, Head of Quantitative Strategies at the Second AP Fund.

#### Good for Sweden's pensioners

For the Second AP Fund, the implementation of ESG factors in investment decisions can generally be explained based on two



More about the Fund's management strategy at www.ap2.se

aspects: There is a certain amount of historic support for why companies with a good environmental profile and corporate culture, for example, have better returns than other companies. There is also reason to believe that this development will continue, which means that several players will invest in these companies. This benefits the Second AP Fund which already consider these questions in investment decisions.

"We are one of the few players in the industry that has taken this work to another level at an early stage by looking at the basic data instead of completed ESG factors. Getting as close to the basic data as possible is important and is fully in line with the fund's other quantitative management," says Tomas Morsing.

The Second AP Fund's ESG model includes environmental factors which include specific measurements, for example, how much carbon dioxide the companies emit or how much energy they consume. The model also includes measurements and indications of social factors and corporate governance factors which, guite simply, can be said to indicate whether it is a healthy company.

"A fundamental portfolio manager, who monitors fewer companies can obtain this information by encountering the companies. For us who invest in approximately 2 500 companies, this is difficult, but because we now have managed to quantify an indirect measure of the companies' corporate culture, we can include the information as it is," explains Claes Ekman.

An example of an interesting observation that the Second AP Fund has made is that companies where the proportion of women in senior positions is high also show better performance, regardless of the size and type of company. An explanation of this could be that these companies have a greater focus on



We are one of the few players in the industry that has taken this work to another level at an early stage by looking at the basic data instead of completed ESG factors.

issues related to values and corporate culture, which is reflected in the Fund's measurable indicators such as the proportion of women in senior positions or the amount of internal training.

#### The work goes on in 2017

The ESG factors started in the autumn of 2016 to gradually be implemented in the six different indices in the Second AP Fund's quantitative model. The implementation is now complete, which means that ESG, along with other factors, are a part of the investment decisions.

The next step in this work is a project that started in 2016, where the Second AP Fund's equities team will be closer to a strategic working method in these issues by developing an ESG weighted index. In terms of the management of global corporate bonds, it is planned in 2017 that ESG factors will be implemented in the same way that has now been done by the quantitative equities team.

# Recognized risk management

In the last year, the risk activities of the Second AP Fund have received very positive attention. A few explanations for this is that the Fund's work is characterised by both risk control and analysis, innovation and a culture where employees understand their responsibilities. Through continued improvement work, the leading risk work will become even better.

The Second AP Fund's portfolio looks very different today than it did at the start in 2001. When new asset classes are added, it is a challenge to assess risk correctly. Events in the outside world such as the 9/11 terrorist attacks in New York and the financial crisis of 2008–2009 have also resulted in changed conditions which have highlighted the importance of active and good risk activities.



Today we have a modern risk model that provides increased understanding for how the portfolio reacts in different markets and sound processes...

#### Risk activities benefit the pensioners

The Second AP Fund's risk activities are based on the Fund's mission and the legislation that governs the AP Funds' businesses. One example is that the risk monitoring is carried out daily to ensure that the Fund's investment regulations are followed. Good risk control is another fundamental part of the daily risk activities where holdings in the Fund's portfolio are followed up, among other things.

"We've really developed the risk area. At the start in 2001, we began by creating risk activities. Today, we have a modern risk model which provides increased understanding of how the portfolio reacts in different markets and sound processes, which means that we can adapt to changes in the world around us," says Mia Tegbrant, Head of Risk Management at the Second AP Fund.

The Second AP Fund also performs risk analyses which primarily focus on the financial risks – marketing, credit and liquidity risk – with the ambition to eliminate or minimise unwanted risk as far as possible. The Fund's risk analyses ensure that the risk of different investments is controlled and desired. For Sweden's pensioners, this means a more secure and even pension.

#### Good organisation and clear structure

In the government's annual evaluation of the AP Funds' activities, it was noted that the AP Funds have developed the work in the area of risk significantly in recent years and have a high level of ambition. The Second AP Fund received praise for the Fund's well-developed organisation and clear structure for the risk work.

"It is really nice to receive recognition for the systematic work we have performed for several years. This is the result of a culture that we have built up in which all parties that manage risk - from the Board of Directors, via the management and those of us who work with risk, to the portfolio managers – are ambassadors for ensuring the work is done well," says Mia Tegbrant.

The organisation and structure that the Second AP Fund has developed is based on a systematisation of the different roles within risk with a clear risk mandate from the Board of Directors to the CEO and then to individual managers. The risk management consists of three independent but cooperating functions: Risk Management, Compliance and Risk Budgeting/ALM. The fact that Risk Management is also independent from asset management ensures its independence. The fund's management includes the Head of Risk and Return Analysis, which also provides a clear focus on the issues. The Board of Directors appointed a risk committee in 2011 where the Head of Risk and Return Analysis and the CEO are rapporteurs. The committee advises, supervises and prepares issues related to risk for the purpose of providing a more in-depth follow-up and analysing risks and returns in the portfolio at board level.

#### Protecting major values

Another area in which the Second AP Fund was lauded in the government's evaluation was the Fund's work on the operational risks. This area concerns the risk of losing money or reputation as a result of deficiencies in processes, people or systems. A recognised example was when the Barings Bank collapsed in 1995 after extensive speculation from one of the bank's employees. Minimising operational risks can therefore protect major values.

The Second AP Fund conducts systematic work on operational risks. This started back in 2007 with an evaluation of the individual organisation in order to identify systematic risks. Since then, the Fund has continued the work of operational risks and currently has a well-developed structure for reporting, follow-up and anchoring in the management.

The Second AP Fund also works actively to map the Fund's portfolio management processes. Twice a year all process managers meet in order to clarify the risks present in the processes and how these can be removed. The work has been received positively, and has contributed to the risk culture in the organisation. Because each employee understands their responsibility towards these issues, the risk of the Fund is reduced as a whole.

In addition to the self assessment and the process management work, the Second AP Fund has in 2016 implemented a new and more developed version of the incident tool in which operational risks are included. The tool is used to register all incidents, even if the effect of each incident is small, much can be gained by removing them. This also creates a good picture of where the incidents occur in the ongoing work.

"Operational risks are our flagship. We have been visited by the other AP Funds who want to see how we work. But we have also been inspired by others, for example, invited speakers. We're always thinking innovatively. This is an area that you are never finished with," says Mia Tegbrant.

#### New world class risk system

The Fund's risk system was also celebrated in the government's evaluation. During 2016, the Second AP Fund has implemented two new systems that make it possible to examine risk and clarify how different parts of the portfolio contribute and correlate based on a forecast of the risk outcome.

Through the systems, reports and analyses of the entire portfolio's risk can be created for the portfolio managers, executive management and Board, making it easier to optimise the portfolio with the correct risk. In addition, stress tests and scenario analyses can be made of the portfolio, which means that the Fund can identify potential financial risks that occur due to extreme events. This means specifically that an event, which may be historic or hypothetical, is applied to an existing portfolio. This is done in order to gain insight into how the portfolio responds to different types of events, how the connections look and how sensitive the portfolio is.

#### Focus 2017

The main focus for the Second AP Fund's risk activities in 2017 is to further develop the reporting by producing customised reports for different departments. In addition, the Fund will implement a new limit module in the portfolio system with better opportunities for analysis and follow-up.

In a constantly changing world, it is important to be able to meet the challenges that this can mean through a thorough analysis. In 2017, the Second AP Fund will therefore direct a strong focus on developing and implementing more structured and ongoing stress tests.

ESG (Environmental, Social and governance) is a challenging and exciting area. In a project that will be performed in 2017, the Second AP Fund will analyse the risk of the holdings in the Fund's portfolio from an ESG perspective.

For the operational risks, the Fund's continued work on identifying continuous improvements, including by streamlining flows and processes.



#### AN ATTRACTIVE WORKPLACE

# Staff who create value

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

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

#### Culture and values

During the year, the Fund has continued the process of building a robust culture and strengthening its joint values. The values on which this culture is built are the creation of long-term value, responsibility, respect and consistent improvement. This process is intended to clarify and promote consensus around the Fund's values and to establish the principle that these values should provide guidance in the Fund's day-to-day operations.

The Second AP Fund's culture is notable for encouraging personal responsibility and individuality within the broader framework of a strong team spirit. Ethical behaviour is an important element of this culture and forms a natural part of the Fund's values system. During the year, the Fund carried out training in the regulations concerning hospitality and gifts and the new market abuse regulations.

#### **Ongoing internalisation**

Part of the Fund's long-term strategy is the steady build-up of still more professional and cost-efficient portfolio management, relying on its own in-house resources. The process of internalising the Fund's portfolio management activities has continued within this strategic framework throughout the year. Of the Fund's capital assets 83 per cent are managed in-house, involving a growing number of asset classes and strategies, placing considerable demands on its competence in different investment sectors, as well as on its business services and risk and performance analysis.

#### **Exchanging competence**

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

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

#### Leadership training

Strong leadership is a key competitive tool in promoting the development and motivation of members of staff. The Second AP Fund's leadership strategy defines the skills, attitudes and responsibilities that managers within the organisation are expected to possess.

#### Health

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

The Second AP Fund supports activities that help inspire and stimulate a healthier lifestyle.

#### **Diversity**

The Second AP Fund considers it important that its workforce should reflect diversity in terms of background, experience, age and gender. The Fund evaluates and develops employees' work and skills regardless of age or ethnicity and wants to be an attractive employer for both men and women. An active equality and diversity work in the Fund contributes to increased motivation and satisfaction among employees, which in turn

increases the Fund's competitiveness and possibility to generate good returns.

The Fund enables men and women to combine work with family responsibilities by offering flexible working hours and working under one's own responsibility. In 2016, two men and no women took parental leave at some point during the year.

#### Collaboration with Mitt Liv (My life)

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

#### Remuneration

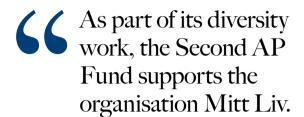
To be able to recruit and retain the right staff, the Second AP Fund strives to remunerate its employees at a level that is motivating and consistent with the industry at large.

#### Board's area of responsibility

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

#### Guidelines for remuneration

The total remuneration paid to senior executives should be reasonable and well balanced. It should also be competitive and appropriate, featuring clearly defined upper limits and contributing to solid business ethics and a healthy organisational culture.



These levels of remuneration are not salary-inflationary in relation to comparable institutions, but are moderate in character.

The remuneration shall comprise a fixed basic salary, performance-based variable remuneration (not applicable to the Fund's executive management), pension and benefits.

#### The Board's follow-up

For more than a decade, the Second AP Fund has participated in the annual salary and benefits survey conducted by Towers Watson, a firm of independent analysts. This annual survey generates comparative statistics for individual positions held at relevant and comparable organisations in the financial industry.

The purpose of this survey is to report on the market rate for salaries and benefits paid to different staff categories, based on data supplied by the participating companies. The Second AP Fund has used this statistical data to compare remuneration levels for all its employees. In 2016, the levels of remuneration provided by the Fund were compared with some 15 other private and state players in the financial sector, including Swedish pension fund AMF, other AP Funds and Kammarkollegiet (Swedish Legal, Financial and Administrative Services Agency).

The Fund's remuneration policy is based on the idea that the level of remuneration should be close to the median for the reference group employed in the Willis Towers Watson salary and benefits survey. The Board considers that the levels of remuneration paid to senior executives, as well as to other members of the Fund's staff, are reasonable, well balanced, competitive and appropriate, featuring clearly defined upper limits and contributing to solid business ethics and a healthy organisational culture.

These levels of remuneration are not salary-inflationary in relation to comparable institutions, but are moderate in character

and fall well within the parameters prescribed by the Board concerning staff remuneration. The Board is satisfied that the Fund is in compliance with Swedish Government guidelines on remuneration, apart from the period of notice. Nevertheless, the combined costs incurred in connection with a dismissal are well within the limits defined in the Swedish Government guidelines. More information at www.ap2.se

#### Performance-based variable remuneration

The Board of Directors approves a programme for variable remuneration in line with the Swedish Government's guidelines. The Second AP Fund's incentive programme comprises all staff apart from the CEO and other members of the executive management.

This incentive programme means that all other members of staff are entitled to a maximum of two months' salary in variable remuneration. The programme is linked to long-term goals calculated over three and five years. This variable remuneration may only be paid out when the Fund reports a positive total return.

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

#### Recruiting talent

As a global fund manager operating across a broad range of asset classes, the Second AP Fund fosters many specialist roles and creates many career opportunities. The Second AP Fund strives first and foremost to recruit from within the organisation and to encourage internal mobility. In this way, specialist skills and expertise can better be utilised. For a number of years, the Fund has cooperated with the School of Business, Economics and Law at the University of Gothenburg, and Chalmers Institute of Technology, enabling them to offer students opportunities of temporary employment on specific projects, trainee positions and temporary employment during summer vacations. This has created a solid recruitment base for future employees. Eleven of the Fund's current members of staff have come direct from studies at the School of Business or Chalmers.

#### Cooperation with academia

For the Second AP Fund, active participation in the latest research in the financial sector is a self-evident necessity. As well as carrying out their own research, Fund employees also attend conferences at which research results are presented. Read more about the research that the Fund's employees participated in at www.ap2.se

For some years now, the Second AP Fund's CIO (Chief Investment Officer), Hans Fahlin, has chaired Inquire Europe. This is a cooperative, non-profit professional organisation which was formed in 1990. It was established to bring together leading academic researchers and investment professionals interested in understanding and developing quantitative solutions to financial and investment problems.

Eva Halvarsson is Vice Chair of the Board of Gothenburg University, as well as a member of the advisory board of the School of Business, Economics and Law at the University of Gothenburg.

#### **Staff statistics**

	2016	2015
No. of permanent staff	66	64
Female staff, %	33	34
Female staff in executive management, %	29	29
Average age, years	43	44
Median age, years	43	44
Personnel turnover, %	7.5	4.7
Absence due to illness, %	2.5	2.1

#### **SUSTAINABILITY**

# Values are created by integrating sustainability into asset management

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

By actively addressing and integrating environmental, ethical and corporate governance issues in its asset management, the Second AP Fund can generate value. The term that the Fund uses to embrace these issues is sustainability. Integrating sustainability factors into analyses and investment processes generates broader and better decision data.

**Focus areas** 

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

The Fund's broad priority is:

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

The Fund's specific focus areas are:

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

The Fund possesses extensive expertise and experience in these selected focus areas, having been engaged in these issues for a considerable period.

The work carried out in these focus areas, will target companies in which the Fund has invested most heavily and/or those in which it controls a substantial interest and in sectors deemed to

pose considerable risks in terms of financial sustainability. The reason why the Fund has chosen to focus on these areas and companies is that they are financially important for the Fund. The work is conducted both internally and in cooperation with other investors to achieve improvements for an individual company and/or within one sector.

#### Key events in 2016

During the year, the work in the area of sustainability continued to be developed and intensified. Great emphasis has been placed on integrating these issues into asset management.

Additional steps for integrating sustainability

The Second AP Fund has taken additional steps to integrate sustainability in asset management by implementing ESG factors in the asset class global equities in the quantitative administration. Read more on page 20.

Developed strategy for green bonds

The Fund decided during the year to allocate one per cent of the total strategic portfolio to green bonds and thus the asset class became a part of the overall investment strategy. Thereby the Fund took a new strategic hold on sustainability investments and further steps to implement sustainability issues into asset management.

In addition, the Fund has continued its investments in green and social bonds which are managed in the Fund's existing bond portfolio. The Fund currently has a total of SEK 5.3 billion invested in green and social bonds.

Ranked eight in the world for handling climate risks
The Second AP Fund was ranked number eight in the world for handling climate risks by the Asset Owners Disclosure Project (AODP). AODP assesses the world's 500 biggest capital owners – based on their ability to manage climate risks in their investments.

#### Investment to promote female entrepreneurship

The Second AP Fund took another important step in the area of sustainability by investing USD 30 million in Women Entrepreneurs Opportunity Facility (WEOF), which is a partnership between Goldman Sachs 10 000 Women and IFC (International Finance Corporation). The purpose of WEOF is to increase the supply of capital for female entrepreneurs in emerging countries. Today, WEOF has a lending of USD 600 million. The loans help to bridge the global credit gap, at an estimated USD 285 billion, experienced by small and medium enterprises owned by women, as well as making it possible for 100 000 female entrepreneurs to develop their companies.

Proportion of female board members just over 30 per cent The Second AP Fund Kvinnoindex (Female Index) for 2016 shows that the proportion of female board members of the companies listed on Nasdaq Stockholm continues to increase and amounted for the first time to over 30 per cent (30.7). The proportion of women in executive management is increasing at a steady pace and for the year amounted for the first time to more than 20 per cent (20.9). For newly elected members, a total of 44.9 per cent were women.

#### Phased out ownership of additional fossil companies

The Second AP Fund has during the year further reduced its financial risk within fossil energy. In 2014, the Second AP Fund performed its first risk analysis of fossil energy companies based on a climate risk perspective and decided to divest from a total of 20 fossil energy companies. In 2015, a similar analysis of electricity generating companies was performed, which resulted in the fund divesting from 28 companies. The Fund performs an annual follow-up of these analyses, based on the criteria set out to explore which companies meet the criteria. The follow-up in 2016 resulted in the Fund divesting from a further eleven coal companies, eight oil and gas companies and ten electricity producing companies. In total the Fund has now divested from 23 coal companies, 15 oil and gas companies and 38 electricity producing companies.

#### The UN's global sustainability goals

Through the Second AP Fund's sustainability work and investments, the Fund contributes in different ways to the UN's Sustainable Development Goals. During the year, the Fund wrote letters to just over 40 Swedish companies and encouraged them to describe how they link their operations to the UN's 17 sustainability goals. The Fund encouraged the companies to report on their attitude towards the sustainability goals no later than at the 2017 Annual General Meeting.

#### Approach to climate change

The Fund has produced a document – the Second AP Fund's approach to climate change – in order to create a better understanding of why the Second AP Fund is working with the climate issue, but also how the Fund is doing so. The document describes how the Fund integrates climate analyses in the investment process and how the Fund is working with the climate issue.

Climate is one of the Second AP Fund's focus areas and the Fund's ambition is to develop the portfolio in line with the two-degree target. To achieve this, the Fund works actively to include different types of climate information in analyses and investment processes. On the basis of the Fund's mission, the Fund is also seeking investments that contribute to a shift towards a two-degree society.

More detailed information on the Fund's sustainability work can be found in the Fund's Sustainability and Corporate Governance Report, www.ap2.se

#### About the Fund's sustainability reporting

Every year, the Second AP Fund publishes a separate sustainability and corporate governance report. This year, the Fund has chosen to publish the report at the same time as the annual report. The Fund only publishes certain information about sustainability in the annual report while more detailed information is presented in the sustainability and corporate governance report. Both these reports must be considered as one entity, where information can occur in either the report and in certain cases in both. For more information, visit the Fund's sustainability pages at www.ap2.se or read the Fund's sustainability and corporate governance report.



# Result and performance 2016

As of 31 December 2016, the Fund capital totalled SEK 324.5 billion. The net result for the year, SEK 30.5 billion, is the result of positive returns in all asset classes, not least equities and bonds in emerging markets. During the year, net outflows from the Second AP Fund to the national pension system totalled SEK 6.6 billion.

Fund capital is affected by two factors, the net result for the year and net flows within the pension system. In 2016, Fund capital increased by a net of SEK 23 898 (6 717) million, deriving from the positive result of SEK 30 535 (11 661) million, against which net outflows to the pension system were charged in an amount of SEK –6 637 (–4 944) million. Capital flows consisted partly of contribution payments to the system and pension disbursements from it, amounting to a net of SEK –6 421 (–4 768)

million, and partly of the cost of administering the pension system, which was charged against Fund capital in an amount of SEK –216 (–176) million. For the eighth year in succession since the pension system was launched, the net of inflows and outflows to the pension system from the AP Funds was negative. Consequently, the Second AP Fund has paid out a total of just over SEK 36 billion in the last eight years to cover the current deficit in the pension system.

#### Fund capital performance 2016, SEK million

	2016	2015
Fund capital brought forward	300 624	293 907
Pension contributions received	64 174	61 373
Pension disbursements	-70 595	-66 141
Administration contribution	-216	-176
Net result for the year	30 535	11 661
Fund capital carried forward	324 522	300 624

#### Composition of strategic portfolio, exposure and return as per 31 December 2016 and 31 December 2015

	Strat portfo		Exposu	ıre, %	Exposed SEK b		Abso returr		Relat return		Active ex post	
Asset class	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Swedish equities	10.0	10.0	10.0	9.6	32.6	29.0	9.1	15.2	-1.0	5.9	2.0	1.6
Equities, developed markets	22.5	24.0	22.1	23.6	71.8	70.9	16.9	9.4	0.5	0.7	0.4	0.4
Equities, emerging markets	11.0	11.0	10.5	10.3	34.2	31.1	18.9	-9.1	-0.6	-0.1	0.8	8.0
Swedish fixed-income securities	13.0	16.0	12.7	15.0	41.0	44.5	2.2	0.7	-0.3	0.0	0.3	0.3
Foreign government bonds	4.0	5.0	3.8	4.7	12.4	14.2	8.3	2.1	0.4	-0.4	0.6	8.0
Foreign credits	10.5	7.0	10.0	6.7	32.6	20.2	12.3	3.2	0.1	-0.3	0.3	0.3
Global green bonds	1.0	-	1.0	_	3.1	_	5.6	_	-0.8	_	_	_
Fixed-income securities, emerging markets	6.0	6.0	5.9	5.7	19.0	17.3	17.8	-7.2	-0.4	-0.2	0.3	1.9
Total listed assets, excluding alternative investments, commission fees and operating expenses	78.0	79.0	76.0	75.6	246.7	227.2	9.6	2.4	-0.4	0.9	0.4	0.4
Alternative investments	22.0	21.0	24.0	24.4	77.8	73.4	13.5	9.4				
Total Fund capital, excluding commission fees and operating expenses	100.0	100.0	100.0	100.0	324.5	300.6	10.5	4.1				

<sup>\*</sup> Historical outcome, 12 months rolling

# Net result for the year

The net results was SEK 30.5 billion and reflects, above all, a strong stock market trend both in emerging markets as well as in other markets. The Fund's investments in all asset classes have generated a positive total return of 10.5 per cent.

#### Operating income

Operating income comprises direct return as well as net result per asset class, foreign-exchange gains/losses and commission fees. Direct return, in the form of net interest income and dividends received, totalled SEK 8 250 (7 355) million for the year. The net result for listed equities comprises both unrealised and realised gains/losses, and totalled SEK 8 139 (3 608) million, including expenses for performance-based fees but excluding foreign-exchange effects. This result derives from the high return within all markets where emerging markets reported the highest return in 2016. The Fund's portfolio of Swedish equities generated a total return of 9.1 per cent, compared with a return of 16.9 per cent on the developed market portfolio of foreign equities and a somewhat higher return in emerging markets of 18.9 per cent.

The net result for non-listed equities totalled SEK 3 923 (3 934) million, and is primarily attributable to the increase in value in the real-estate portfolio and positive gains on its investments in private equity funds. The net result for fixed-income securities totalled SEK 2 179 (–3 033) million, a result that reflects the fixed-income market's higher returns in 2016, compared to 2015. All fixed-income asset classes had positive returns and the emerging market portfolio of fixed-income securities achieved a return of 17.8 per cent. Over the past few years' internalisation process, large parts of the fixed-income securities management have been transferred to the in-house management.

The Fund's trade in derivatives posted a negative net result of SEK –162 (–62) million, this negative result deriving from derivative exposure to fixed-income markets.

As a consequence of the weakening of the Swedish krona in 2016, the Fund's exposure in foreign exchange (FX) had a positive impact on the reported net result for foreign exchange assets. The Fund's ongoing hedging of parts of the portfolio of foreign exchange assets during the year has had a negative effect on the net result. The reported net of foreign-exchange gains/losses, where the exchange gain on foreign holdings (SEK 15.8 billion) and the negative impact of currency hedging (SEK –7.1 billion) are reported together, amounted to SEK 8 687 (392) million. More details of the Fund's FX exposure on page 48.

Management costs in the form of performance-based fees, totalling SEK 139 (144) million for 2016, have been charged against the net result for externally managed assets. This cost arises when an external portfolio manager generates a return over and above the agreed target, which has a direct impact on the net result reported for each asset class, as per current accounting principles. Commission expenses pertaining to fixed external management fees of SEK 225 (294) million, as well as custodial expenses of SEK 39 (27) million, were charged against operating income. The reduction in external management fees is an effect of the successive transfer of externally managed capital to in-house management in the last few years. The increase in custodial expenses is a natural effect of the same process, as several external mandates were previously managed in Fund format and therefore did not directly affect the Second AP Fund's custodial expenses.

#### Fund's total expenses

The Fund's total expenses include in-house expenses in the form of operating expenses, fixed external portfolio management and custodial charges. Variable expenses related to performance based contracts and management fee payments reported are charged against the net result for each asset class, as described in Notes 3 and 4 on page 56. The Fund's operating expenses and commission expenses, expressed as an expense ratio, had fallen and amounted to 0.15 (0.18) per cent for 2016.

The level of costs is a direct effect of the Fund's investment strategy, according to which external managers are entrusted for asset classes and markets that are believed to offer the prospect of solid returns and for which the Fund lacks the necessary in-house resources. The Fund's focus on internalisation in the last few years, which has meant that SEK 50 billion of the managed capital has been transferred from external to in-house management, has had the desired effect on the cost level. The Fund's total expenses for 2016 amount to 0.15 per cent of the fund assets, a level that, except 2007, is the lowest since the start. This is despite the fact that the portfolio over the years has become increasingly complex with different asset classes in a growing number of markets throughout the world. The internalisation has therefore enabled increased diversification up to the current strategic portfolio. Read more about the Fund's internalisation on page 49.

A global cost-efficiency comparison with other pension funds demonstrates that the Second AP Fund is highly cost efficient, which is commented on in greater detail on page 50.

#### **Operating expenses**

Operating expenses totalled SEK 217 (212) million. Reported as a ratio of average Fund capital over the twelve months, this corresponds to an unchanged cost level (asset management cost share excluding commission fees) of 0.07 (0.07) per cent.

#### **External management costs**

Management costs are to a large extent determined by the volume of Fund capital, the percentage of assets under external management and the degree of active risk adopted, as well as the asset class selected. During 2016, the approach adopted for Fund capital under external management was mainly active and, by year-end, SEK 57 (51) billion was being managed under external mandates, including non-listed assets. This corresponds to 17 (17) per cent of the Fund's entire capital.

The cost for the external management of market-listed assets partly comprises a fixed element and, for certain assignments, a performance-based element. In 2016, the fixed cost amounted to SEK 219 (291) million and the variable performance-based element to SEK 139 (144) million. If the management fee for unlisted funds is included, the combined fixed cost for external management of the Fund's assets was SEK 225 (294) million. The decrease is a direct result of the internalisation process in recent years, which has meant that external management costs have reduced significantly while the custodial expenses have increased slightly. The year's cost level has been negatively affected by a weaker krona. Furthermore, the fact that the AP Funds have been liable to pay VAT on foreign acquisitions since 2012 has also increased costs. As the AP Funds are not entitled to reclaim VAT payments, this VAT registration requirement constitutes an increase in the Fund's overall costs.

#### **Custodial expenses**

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

expenses have been included in fund fees, have partly been transferred to in-house management. This transfer, combined with the rise in value of all assets, has led to higher custodial expenses after the internalisation. They are also affected by the type of asset deposited with the custodial bank. Assets exposed to emerging markets, for example, are relatively expensive to place on deposit. The Fund's custodial expenses totalled SEK 39 (27) million in 2016.

#### **Brokerage commission**

A brokerage commission is paid on the purchase and sale of equities and participations. When buying and selling other asset classes, the transaction cost is limited strictly to the difference between the buy and sell rate, known as the 'spread'. To establish comparability between different asset classes, commission is reported as a deductible item under Net result, listed equities and participations (see note 2 on page 56). Commission fees paid in 2016 totalled SEK 103 (118) million. Of these costs, 4 (7) per cent derived from commission paid to the Fund's external managers, the remainder to the Fund's in-house portfolio management organisation. Costs amounted to 0.06 (0.06) per cent of the total trading volume. The following five counterparts (listed in alphabetical order) received commissions corresponding to 64 per cent of total commission payments: Credit Suisse, Goldman Sachs, JP Morgan, Merrill Lynch and UBS AG.

#### Significant events after the reporting period

During 2016 a contract was concluded to sell the Second AP Fund's shares in five private equity funds and sales are expected to be completed during the first half of 2017. The sale will be reported on the transaction date due to pre-emptive rights clauses in the contract.

#### Contribution to relative return, %

Asset class	2016	2015
Swedish equities	-0.13	0.68
Equities, developed markets	0.15	0.19
Equities, emerging markets	-0.09	-0.02
Swedish fixed-income securities	-0.06	0.00
Foreign government bonds	0.02	-0.03
Foreign credits	0.01	-0.03
Global green bonds	-0.01	_
Fixed-income securities, emerging markets	-0.02	-0.03
Absolute return	-0.21	0.21
Total market-listed assets, excl. alternative investments and implementation effects	-0.34	0.97
Implementation effects*	-0.06	-0.08
Total market-listed assets excl. alternative investments and incl. implementation effects	-0.40	0.89

<sup>\*</sup>Result effects to maintain exposure to strategic portfolio.

#### Contribution to absolute return, %

1.5 2.8 -1.0 0.1
-1.0 0.1
0.1
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0.3
_
-0.5
0.2
0.2
-1.3
2.1
4.1

#### Portfolio return

The return on the total portfolio for 2016 was 10.5 per cent, excluding commission fees and operating expenses but including performance-based fees.

Among the listed asset classes, emerging-market equities achieved the highest return with 18.9 per cent. Foreign equities on developed markets noted a return of 16.9 per cent in Swedish kronor, excluding FX hedging effects. Swedish equities had a return of 9.1 per cent.

Swedish bonds generated a return of 2.2 per cent. Foreign government bonds and credits saw their value increase in Swedish kronor, excluding FX hedging, by 8.3 and 12.3 percent respectively. In emerging markets, bonds performed well after the previous year's negative performance, thanks to both interest rates and currency effects. The return in 2016 was 17.8 per cent in Swedish kronor.

Alternative Investments, i.e. real estate, private equity funds, alternative credits, alternative risk premiums and China A shares, generated a return of 13.5 per cent, including FX hedging.

The contribution made by different asset classes to the total result depends both on the return generated and on the relative percentage of portfolio value they represented during the year. Representing a large share of the portfolio, equities on developed markets contributed 3.7 per cent to the overall result. Swedish equities contributed 1.0 per cent and emerging-market equities 2.1 per cent. Swedish bonds and foreign government bonds both contributed 0.3 per cent. Foreign credit bonds contributed 1.2 per cent, while emerging-market bonds improved the net result by 1.0 per cent. Alternative investments contributed 3.1 per cent, including FX hedging.

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

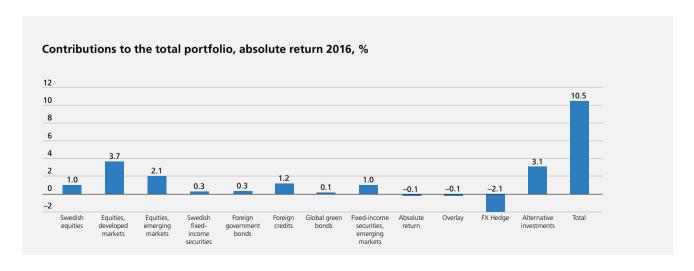
programme of developed countries' currencies, with a view to reducing variation in portfolio worth over the long term. Due to the weakening of the Swedish krona during the year, currency hedging contributed negatively to the portfolio of listed assets by –2.1 per cent of the total portfolio's return. Due to the fact that the Fund does not hedge its entire exposure to the currencies of developed countries, this negative effect on overall return was more than compensated by the rise in the value of its foreign exchange assets. The Fund does not hedge emerging market currencies.

The Fund's real estate portfolio, excluding timberland and farmland, achieved, as the previous year, an excellent performance and returned 20.0 per cent. The portfolio of timberland and farmland returned 8.4 per cent. The return on private equity investments was 16.8 per cent, while the portfolio of alternative risk premiums generated 7.6 per cent.

The Fund invests in equities on the domestic Chinese market, so-called China A Shares. In view of the fact that opportunities for adding or withdrawing assets from this portfolio are subject to certain administrative constraints, it has been classified under alternative investments. After the previous year's very high return, the development in 2016 turned and the portfolio returned –4.0 per cent.

The Fund's portfolio of alternative credits mainly comprises listed corporate loans intended for short-term investment, but also includes high-yield credit bonds. The return for the year was 8.6 per cent.

Over the past five and ten years respectively, the Second AP Fund has generated an average return on invested assets of 10.8 and 5.7 per cent per annum. Less inflation, this is equivalent to an annual real return of 10.8 per cent over five years and 4.7 per cent over ten.



# Relative growth for portfolio of listed assets

The Fund's portfolio of market-listed securities comprises Swedish and foreign equities, Swedish and foreign fixed-income securities, tactical allocation and FX management. In 2016, the listed portfolio posted a positive return of 9.6 per cent. Total relative return, i.e. active return minus implementation effects (costs arising in connection with rebalancing and transactions that are not attributable to active management) was –0.4 per cent. The relative return is charged with –0.1 per cent attributable to implementation effects.

Over the past five years, the Fund's active return has averaged 0.6 per cent per year. For four of these five years, the active return has been positive. Over the same period, implementation effects have averaged –0.1 per cent. Thereby, the average relative return has been 0.5 per cent. The Fund's in-house target for relative return is 0.5 per cent per year.

## Swedish equities

Last year the management of the Swedish equities exceeded the benchmark index by almost 6 per cent. This year, however, it fell below its benchmark index by 1.0 per cent. The portfolio of fundamental-focused large caps underperformed against the market index by –1.6 per cent, and –1.3 per cent for the portfolio matched against an equal weighted index. The Fund's management of small cap investments were successful again, generating an excess return of 3.2 per cent. The Fund manages all Swedish equities in-house.

#### Relative return per asset class 2016 (2015), % 0.4 Total market-listed 0.4 investments and costs 0.1 0.2 Swedish equities -0.4 -1.0 -0.6 -0.3 0 -0.2 Equities, emerging markets ■ Swedish fixed-income -0.4 securities Foreign government bonds -0.6 Foreign credits -0.8 ■ Global green bonds Fixed-income securities, emerging markets

# Foreign equities

The Fund's management of foreign equities in developed markets delivered a positive active result of 0.5 per cent. The active result for emerging-market equities was –0.6 per cent. China A shares are managed under large-deviation mandates, and the active return for the year was 8.7 per cent. Since these Chinese equities are part of the portfolio's alternative assets, this active return is not included in the Fund's combined active return.

# Swedish and foreign fixed-income securities

The active return on Swedish fixed-income securities was –0.3 per cent. The Fund's active return on its quantitative management of fixed-income securities was positive for the tenth year in succession, at 0.1 per cent. The portfolio of foreign government securities, managed in-house, outperformed index by 0.4 per cent.

Last year, the portfolios of credits under external mandates were transferred to the Fund's in-house management team. The management was initially passive but became active during the year. The active return was 0.1 per cent.

The management of emerging-market bonds, issued in US dollars, achieved an active return of –1.0 per cent during the year. The management of emerging-market bonds in local currency takes place passively, but will become active in the coming years. The relative return on this passive management was –0.2 per cent.

# Tactical allocation and FX

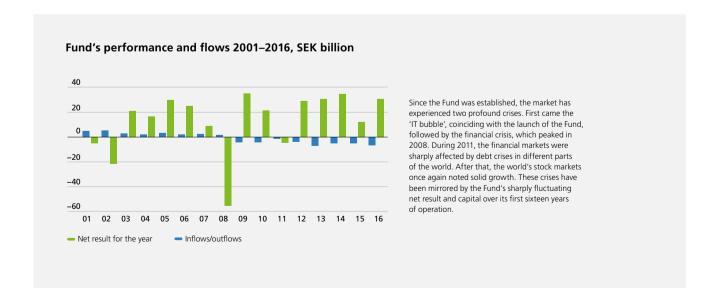
The Fund's in-house tactical allocation activities delivered a negative result of SEK –512 million. In-house FX trading during the year delivered a result of SEK 5 million. The externally managed GTAA mandates continued to make a positive contribution of SEK 90 million to the active return.

## Performance review since start

remormance review since start																
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001
Fund capital, SEK billion	324.5	300.6	293.9	264.7	241.5	216.6	222.5	204.3	173.3	227.5	216.8	190.6	158.1	140.3	117.1	133.5
Net outflows to national pension system, SEK billion	-6.6	-4.9	-5.1	-6.9	-3.8	-1.2	-4.0	-3.9	0.8	1.0	1.6	2.3	1.4	2.1	2.0	3.1
Contribution from liquidation fund/special management fund, SEK million	0	0	0	0	0	0	0	0	53	1 028	108	593	254	424	3 017	1 461
Net result for the year, SEK billion	30.5	11.7	34.3	30.1	28.6	-4.6	22.2	34.9	-55.1	8.7	24.5	29.6	16.1	20.7	-21.4	-5.0
Return on total portfolio before commission fees and operating expenses, %	10.5	4.1	13.3	12.8	13.5	-1.9	11.2	20.6	-24.0	4.2	13.0	18.7	11.6	17.8	-15.3	-3.7
Return on total portfolio after operating expenses, %	10.3	4.0	13.1	12.7	13.3	-2.1	11.0	20.3	-24.1	4.0	12.8	18.5	11.4	17.7	-15.4	
Relative return on listed assets, excl. alternative investments, commission fees and operating expenses, $\%$ <sup>1</sup>	-0.4	0.9	0.5	0.4	1.1	-0.3	0.8	0.7	-1.8	-0.4	0.2	0.2	-0.6	-0.5	-0.4	1.7
Active risk ex post, %	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.6	1.0	0.7	0.7	0.5	0.5	0.6	1.0	1.7
FX exposure, %	31	30	24	23	20	16	12	10	12	11	12	11	10	8	7	10
Share of external mandates, %	17	17	28	25	29	29	23	24	22	24	17	28	37	45	38	82
Expense ratio, operating expenses, %	0.07	0.07	0.07	0.07	0.07	0.07	0.08	0.08	0.08	0.06	0.06	0.07	0.08	0.09	0.11	
Expense ratio, cost incl. commission fees, %	0.15	0.18	0.17	0.17	0.16	0.17	0.17	0.18	0.16	0.13	0.15	0.16	0.22	0.18	0.16	
Annualised return after operating expenses (5.0 years), %	10.6	8.0	9.4	10.8	2.4	0.6	3.5	4.9	3.3	12.8	8.1	4.9				
Annualised return after operating expenses (10.0 years), %	5.5	5.7	7.1	7.0	7.4	4.3	4.2									
Carbon intensity, where the absolute carbon footprint is related to the Fund's share in the companies' market value $(tCO_2e/SEK\ million)^3$	20	25	28													
Carbon intensity, where the absolute carbon footprint is related to the Fund's share in the companies' turnover $(tCO_2e/SEK\ million)^3$	24	29	31													
The absolute carbon footprint, corresponding to the Fund's share of the companies' combined emissions (ktCO <sub>2</sub> e) <sup>3</sup>	2 676	3 372	3 621													
Mapped market value as a proportion of capital, % <sup>3</sup>	97	98	93													
The second secon																

<sup>&</sup>lt;sup>1</sup> Relative return refers to the difference in return between a portfolio and its benchmark or reference index.

<sup>&</sup>lt;sup>3</sup> Key figures are calculated for assets for the balance sheet items equities and participations, listed.



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

# Alternative investments

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

The overall return on alternative investments for the year was 13.5 per cent.

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

The return for respective asset classes is reported both excluding and including FX hedging. As in 2015, the result of FX hedging was negative throughout, in light of the weakening of the Swedish krona during 2016.

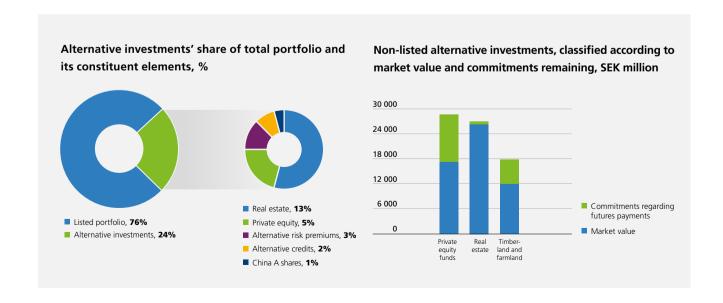
# Private equity funds

The global private equity market's establishment of new funds in 2016 matches the level for the last three years and was less than the maximum level achieved during 2008. North America was still the largest market share within 55 per cent followed by Europe and Asia. Strategies that focuses on medium sized

companies and buyout funds in the United States and Europe had the greatest demand. The establishment of and demand for sector specific strategies was increasing while interest in the emerging markets reduced slightly during 2016. Interest in venture funds was still greatest in the US market and from US Investors, however interest in the UK decreased slightly due to the Brexit referendum.

The number of stock market introductions in the global market during the first quarter was the lowest since 2009 and the total for 2016 was lower than the previous year. However, there was a difference between regions and sectors. Stock market introductions were negatively impacted, among other things, by the prevailing valuation of equities, the political uncertainty prior to the election in the United States, the fact that China Securities Regulatory Commission (CSRC) introduced restrictions on stock market introductions and uncertainty surrounding Brexit in Europe. The need for flexibility in planning and pricing of sales have increased as a result of the market situation.

At the end of 2016, the Second AP Fund's portfolio had an exposure to North America of 59 per cent, Europe of 24 per cent, Asia of 14 per cent and the rest of 3 per cent. The portfolio is diversified per sector, where in 2016 information technology represented 25 per cent followed by infrequently bought commodities and services of 16 per cent and healthcare of 12 per



cent. In terms of investment style, buyout and growth funds had the highest share with 59 per cent followed by venture funds with 21 per cent. Exposure to Europe reduced during the year, primarily as a result of the sale of fund units for the benefit of North America and Asia. Exposure to buyout and growth funds decreased by 4.8 per cent to the benefit of special situations. Sector allocation was relatively unchanged.

The Second AP Fund performed ten investments over the year with one commitment amounting to SEK 2.5 billion. In general, new investment commitments were performed with existing portfolio managers such as Investindustrial, TCV, Seguoia, Abris, Francisco Partners, MBK and SSG with the addition of a new supplementary strategy in China through FountainVest. The Fund's total investment commitments as of 31 December 2016 amounted to SEK 34.0 billion. Since the start in 2001, SEK 21.9 billion (including management fees) has been invested of which SEK 17.4 billion has been repaid. During 2016, SEK 2.6 billion has been invested and SEK 3.6 billion has been repaid which resulted in a net inflow of SEK 1 billion, which mainly consists of an inflow of SEK 0.9 billion through a sale of three fund investments. The Second AP Fund's portfolio was characterised as in previous years by high activity, in which the Funds performed many investments, divestments and stock market introductions.

In recent years, the portfolio's exposure balanced on the boundary of the statutory limit of five per cent, due to the fact that the US dollar rate has gradually strengthened from the end of 2013 to December 2016 by approximately 40 per cent. The Second AP Fund's private equity portfolio has an overall exposure to the US market and the dollar, which has resulted in a significant dollar impact which has been parried with adjusted volumes of new investments and an implemented sale of private equity fund units on the secondary market. Another sale has been agreed and will be completed during the first half of 2017.

The Fund's approach is that a continuous investment rate in a diversified portfolio provides better access to the funds where the Second AP Fund wants to invest and a more stable and long-term sustainable return. On 31 December 2016, the private equity portfolio's exposure amounted to 4.97 per cent. Six funds with a total market value of SEK 1 billion are excluded from the calculation.

These six funds contain more than 50 per cent listed securities and are not defined as non-listed assets in a limit follow-up.

The return on investment in private equity funds was 17.9 (FX hedged 16.8) per cent in 2016. The portfolio's market value was SEK 17.2 billion (excluding currency hedging) at the end of the year. Fees paid for the management of non-listed assets, where reimbursement is permitted prior to profit sharing and is deemed likely, are reported as part of the acquisition value of such assets. See also the Fund's accounting and valuation principles page 54.

# **Traditional real estate**

During the first six months of the year, the Fund, together with the Sixth AP Fund, performed one of the largest real-estate transactions ever in Sweden by selling all equities in Norrporten to Castellum for SEK 14 billion. Norrporten has generated 12.2 per cent per year in return since the start in 2001 and it was assessed that it was the right time to sell the Funds' holdings in Norrporten, and thereby achieve a significant increase in value. For the Second AP Fund, this transaction means yet another step in the portfolio management strategy to increase the proportion of real estate investments internationally over time.

The Fund's non-listed real-estate holdings today consists mainly of a 25 per cent stake in Vasakronan Holding AB, a 41 per cent stake in US Office Holdings and a 25 per cent stake in Cityhold Office Partnership. All investments focus on high-quality, traditional real estate, centrally located in real-estate markets with good liquidity. In addition, the portfolio has been supplemented with investments in real-estate funds, two in Asia, one in Poland and in 2016 it was decided that there would also be an investment in Brazil as well. This is in line with the Second AP Fund's long-term approach to gradually increase the exposure to emerging markets. By investing in real estate, the Fund generates a solid long-term direct return on investment and contributes to a satisfactory spread of risk in the total portfolio.

Vasakronan is owned jointly by the First, Second, Third and Fourth AP Funds. It is Sweden's largest real-estate company, with a concentrated and attractively located portfolio of real estate holdings in the Stockholm, Gothenburg, Öresund and

Uppsala areas. Vasakronan owns approximately 180 properties with a market value of SEK 116 billion.

Cityhold Office Partnership was formed together with the First AP Fund and the US pension fund TIAA in 2015. The company was created to become a leading platform for investments in Europe. The office properties that were previously owned by TIAA General Account in Europe and the First and Second AP Fund's properties in Cityhold Property AB are part of the company. The real-estate portfolio is worth approximately EUR 2.2 billion and consists of 15 office properties with 250 000 square metres of office space in the best locations in the UK, France and Germany. During the year, one property was bought and one sold in London. TH Real Estate handles the company's administration, as well as investment and portfolio management.

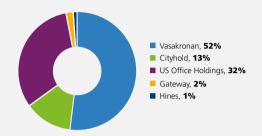
The Second AP Fund along with the national South Korean pension fund NPS and the Tishman Speyer real-estate company own the US real-estate companies US Office Holdings and US Core Office. The companies own real estate both directly and via joint ownership. The real-estate portfolio consists of a total of 22 centrally-located office properties of approximately 1.4 million square metres. The market value of the companies' share of the properties are approximately USD 4 billion. Almost 70 per cent of the portfolio's value consists of real estate on the east and west coast of the US in New York, Boston, San Francisco, Seattle and Los Angeles. 25 per cent of the value of the portfolio consists of properties located in Chicago.

Since 2013, the Second AP Fund has decided to invest in four real-estate funds in emerging markets:

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

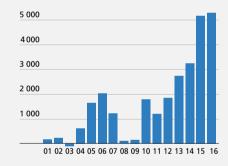
The return in 2016 for the Second AP Fund's investments in conventional properties was 20.0 per cent (including the shares in Castelllum which were obtained in connection with the sale of Norrporten).

# Share of real-estate portfolio, non-listed investments, %

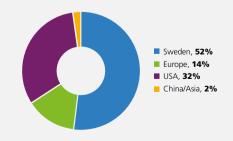


# Portfolio growth, real estate

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



# Share of traditional real-estate portfolio, geographic markets, %



# Timberland and farmland

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

Today, the portfolio of timberland and farmland comprises eleven different funds/companies, with joint investment commitments totalling SEK 17.1 billion as at 31 December 2016. For the Second AP Fund, it is important to choose fund managers that subscribe to the same values of long-term, responsible and sustainable investment. The Fund has elected to invest in farmland in the form of joint ventures with other investors, a form that suits the Fund's long-term approach to these investments. The farmland investments are primarily located in Australia, Brazil and the USA. The main focus is grain production on large-scale, high-quality farmland, in countries that possess clearly-defined legal structures, where agricultural production is effective and not dependent on state grants or other forms of support. During 2016, a new fund investment took place with a focus on large-scale farmland in Eastern Europe, primarily Poland.

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

production is geared partly towards biomass. During 2016, an investment also took place in timberland in the North West of the United States. as well as a fund investment in Australia.

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

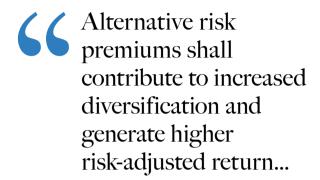
In 2016, the Fund generated a return of 11.1 per cent on investments in farmland and 2.6 per cent on timberland investments. The positive return on farmland is attributable in part to the strong growth in currencies in Brazil and Australia during the year in relation to the US dollar and therefore gave rise to unrealised foreign-exchange gains. This equalises the result of 2015, as these currencies weakened sharply against the US dollar. All timberland and farmland investments in the portfolio note stable and positive revenues in local currencies. The market valuations for the timberland and farmland managed by the funds and companies in which the Second AP Fund has invested also show a stable level.

# Alternative credits

The Second AP Fund has allocated two per cent of its strategic portfolio to investments in credit opportunities that have arisen in connection with the revised regulations and restructure of financial markets, introduced in the wake of the global financial crisis. One example is that the banks have transferred their lending from small and medium enterprises to the very largest companies.

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

The average term for the credits that dominate the investments selected in the credit market segment (loans to companies)



is shorter than for the more common bonds that institutional investors these days have large exposure towards. Shorter terms and, not uncommonly, FRNs (floating rate notes), mean that sensitivity to potential hikes in interest rates from the currently extremely low levels is less.

A number of these assets are defined as non-listed, in which the Second AP Fund has only limited freedom to invest, due to the current legislation affecting non-listed investments. The Fund's restriction to market-listed structures limits the investment choice. The breadth and depth in the listed choice is adequate to enable the Fund to generate the investment opportunities it seeks, even if the opportunities have been considerably greater without the limitation.

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

Since the portfolio was established, the Second AP Fund has conducted ongoing investment in corporate credits by utilising external fund managers that apply broad and in-depth credit analyses. The return for 2016 was 8.6 per cent. 2016 was a good year for alternative credits because low interest rates on global government bonds increased the investors' interest for credits with a higher level of return. The return for the portfolio has over time been at the level of the strategic benchmark index.

# Alternative risk premiums

Alternative risk premiums shall contribute to increased diversification and generate higher risk-adjusted return, since the portfolio is designed to be less dependent on traditional stock market risk. The strategies adopted by the portfolio are linked to stock market volatility, premiums for reinsuring insurance companies, premiums associated with the market for corporate acquisition and convertibles as well as strategies focused on the FX market and the market for future dividends on corporate profits. Other possible risk premiums may be added later. The return for 2016 amounted to 7.6 per cent.

# China A shares

Since 2013 the Second AP Fund has invested in the market for China A shares. In the strategic portfolio, one per cent of capital has been allocated to China A shares and the current exposure is equivalent to 1.3 per cent. The portfolio management takes place through three external managers: APS, Cephei and UBS.

In these investments, the Fund seeks exposure to the structural development of the market and the portfolio strategies adopted involve an agnostic approach to MSCI China A gross, the Chinese benchmark index. The index is considered ineffective and notable for high volatility, which makes a high relative deviation in relative terms likely. During 2016, all of the Fund's managers continued to show a positive relative return against the benchmark index. The absolute return for 2016 amounted to -4.0 per cent.

# RISK MANAGEMENT

# Good spread of risk in the portfolio

The Swedish Parliament has formulated clear guiding principles as to how the AP Funds shall interpret their task as fund managers. The AP Funds shall adopt financial risk in an effective manner with a clear focus on future pensions. Apart from a few constraints, the Funds have been awarded considerable freedom in selecting appropriate risk and investment strategies, independent of one another. The selected strategy shall be neutral with regard to the generations involved and shall ensure the maintenance of pension disbursements.

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

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

The long-term allocation of assets and spread of risk that the Second AP Fund deems will minimise negative effects on future pensions features a relatively high proportion of higher-risk assets. This means that the value of the portfolio, from one time to another, is expected to show a higher variation than if the allocation of assets had been more defensive. A guiding princi-

ple governing the development of the Second AP Fund's longterm investment strategy is to diversify risk in the portfolios where possible, without compromising on the requirement for a high return. In this way, the Fund hopes to minimise the risk of a negative trend in pensions over the long term, while at the same time limiting the portfolio's short-term risk as far as possible.

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

# Controlling risk

The Fund's level of risk is determined by three parameters. The Second AP Fund's risk policy, which is determined by the Board of Directors, prescribes the parameters governing the Fund's overall exposure to risk. The CEO's document 'Guidelines for Investment' contains still more detailed instructions for the management and monitoring of financial risks. For individual mandates, parameters defining levels of exposure to risk are specified in an Investment Guideline.

The starting point for the Second AP Fund's risk process is the annual ALM study. It is based on a number of assumptions concerning long-term market growth and risk levels for different asset classes, and which is a key tool in formulating the strategic portfolio.

# Three collaborative risk functions

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

# Risk budgeting

The Fund's Board of Directors has established the target of a 0.5 per cent excess return, over and above the return determined for the strategic portfolio. In generating this return, the Board has specified that the active risk (tracking error) in managing the portfolio shall not exceed three per cent.

The purpose of the risk budget is to allocate excess return targets and limits for active risk between the Fund's portfolio management teams, to achieve the most effective risk utilisation. In other words, the Fund's information ratio should be maximised. The idea of a risk budget is to delegate targets and resources among the departments' mandates. The target and active risk is defined in the Investment Guidelines for each mandate.

The risk budget is drafted annually. Senior portfolio managers draft a proposal which is presented to the Fund's executive management for approval.

# Compliance

Compliance is responsible for ensuring that the legal and ethical aspects are managed correctly, in compliance with current rules and regulations. The main task of the compliance function is to spread awareness throughout the organisation of the regulations that, in the broadest sense, are important to the Second AP Fund. This can be done in a number of different ways, not least by ensuring that in-house rules, policies and guidelines are established and firmly rooted in the organisation. External regulations include legislation and regulations that apply specifically to the AP Funds, as well as other regulations affecting the capital market, such as those applied to flagging. In-house codes of conduct address areas such as employees' private securities transactions and ensuring that external fund managers observe the terms of their contracts.

# Risk Management

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

## The Fund's risks

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

## Market risk

Market risk refers to the risk that fair value or future cash flows from a financial instrument will vary due to changes in market rates. In the day-to-day portfolio management process, market risk is measured in absolute terms and relative to the benchmark portfolio. The market risks most relevant to the Second AP Fund are share price risk, interest risk and exchange rate risk. The Fund analyses and monitors market risk at fund level, by asset class and per mandate. In this process, the Fund relies on a number of different tools and methods: risk attribution, stress tests and scenario analyses. It also conducts ongoing ad hoc analyses to illuminate the level of risk borne by different parts of the portfolio. Furthermore, the Fund conducts back testing of risk models, as well as the assessment and review of the limit structure.

# Credit risk

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

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

Ways in which the Second AP Fund limits credit risk in the fixed-income portfolio include statutory credit checks and exposure limits. The starting point is an agreed interest-rate index for the strategic portfolio. This index is then used to define the parameters determining permitted deviations in terms of credit

risk limits as per credit rating. To determine the credit risk, the Fund employs median ratings from rating agencies Standard & Poor's, Moody's and Fitch Ratings. When a rating is available from two institutes only, the lowest rating is selected. If a rating is available from just one institute, the judgement is based on this alone. In addition, the Fund has credit risks in fixed-income funds and non-listed assets (alternative credit funds).

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

Issuer risk is not limited to the risk that the issuer may become insolvent. Losses often arise long before a declaration of bankruptcy. The Second AP Fund limits issuer risk by establishing credit-risk limits, for individual issuers as well as groups of issuers. This is achieved, for example, by limiting the total credit risk posed by different groups of issuers based on credit ratings per security.

The liquidation risk is minimised by automatically checking the purchase and sale of equities and bonds with reference to the

broker/counterparty. Special attention is paid to possible deviations, which can quickly be corrected. Payment and execution of the transaction is executed simultaneously.

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

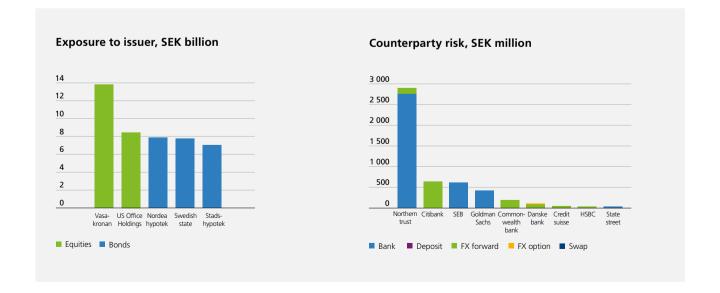
# Liquidity risk

Liquidity risk refers to the risk that securities cannot be converted into cash at the appointed time without incurring a substantial loss or considerable cost. The AP Funds must also be prepared to transfer funds to the Swedish Pensions Agency.

The Fund's liquidity risk is limited by the Swedish National Pensions Funds Act that requires that no less than 30 per cent of the Fund's assets shall be placed in rights to claim at low credit and liquidity risk, and that a maximum of five per cent of the Fund's total assets may be invested in private equity funds. The liquidity risk on the liability side, which is very small, consists of derivative debts.

# Operational risk

Operational risk refers to the risk of losses arising from inappropriate or unsuccessful in-house processes, human error, incorrect



systems or external events. The Second AP Fund identifies operational risks using a variety of analytical methods and tools – including self-assessment, incident log, process analysis, risk indicators and workshops.

The assessment of identified operational risks is then based on determining the likelihood of their happening and the potential consequences. Based on this analysis, the risks are allocated priorities and an action plan is drafted.

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

The Fund's point of departure in process development is to work continually with these processes and monitor any associated risks, as well as ensuring that operations are conducted in compliance with the agreed processes. Process development requires a working approach that is flexible as well as formally defined.

# Portfolio risk 2016

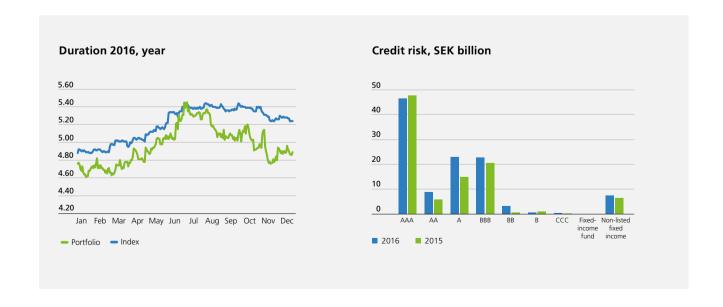
The Second AP Fund reports an increased active ex-post risk for the total portfolio in 2016. Portfolios where the Fund has chosen a higher risk profile have in most cases generated a solid return. The active ex-post risk in 2016 on 31 December amounted to 0.40 per cent (0.37 per cent). The level of active risk noted for asset class Swedish equities rose from 1.6 per cent to 2.0 per cent and reduced for the asset class emerging markets fixed-income securities from 1.9 per cent to 0.3 per cent. Other asset classes noted only minor changes during the year. Covariance between the relative returns on asset classes in the listed portfolio remained low over the year, indicating a good risk spread in the Fund's portfolio.

The ex-post volatility of the listed portfolio, calculated over the twelve months, rose slightly during the year and amounted to 7.2 per cent by year-end.

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

The duration calculated for the fixed-income portfolio was 4.9 (4.8) years as per 31 December, which corresponds to an approximate increase of 0.1 years compared with the preceding year. The increase comes mainly from the asset class foreign credits. The remaining asset classes noted smaller changes compared to the total fixed-income portfolio. The share of duration that derives from maturity segment 0–10 years has changed from 76 to 72 per cent in the past year.

The credit quality of the fixed-income portfolio changed somewhat during the year. The Fund had a triple-A (AAA) share



of 41 (49) per cent, an A share at 20 (15) and a triple-B (BBB) share of 20 (21) per cent. Allocation to foreign credit was one reason for an increased amount of triple-A shares.

During the year the Second AP Fund implemented two new risk systems. MSCI BarraOne is a parametric factor model of factors for all of the fund's holdings and asset classes, which means that the Fund can estimate the risk of illiquid alternative assets and how these risks interact with the listed portfolio. BarraOne's risk engine can also be connected to Excel, which allows for simulations of any transactions and ideas from the portfolio management before the positions are applied. MSCI RiskManager is a powerful and flexible simulation tool which is mainly used by the Fund for calculating risks of capital redemption and/or non-linear mandates. The Second AP Fund is now in the process of developing stress tests for the Fund in RiskManager. Stress tests are a finance tool used to calibrate the unpredictable, i.e. that history does not repeat itself the same way in many assumptions and parameters in traditional risk analysis.

The Second AP Fund's risk taking is very well diversified across a wide range of listed and non-listed investments and asset classes. A number of allocations have significant weightings but contributes nevertheless with little risk due to low covariance with equities, which dominate the Fund's total risk.

Equities contributed nearly two-thirds of the Fund's total ex-ante volatility and the allocation was 43 per cent. Alternative investments contributed approximately a quarter of the Fund's risk, which is in line with the allocation. Interest rate risk was only a couple of per cent although the allocation is a third. Currency accounted for approximately 7 per cent of the Fund's total ex-ante volatility. Idiosyncratic risk contribution was negligible depending on the Fund's wide and global investment philosophy and diversification ambitions.

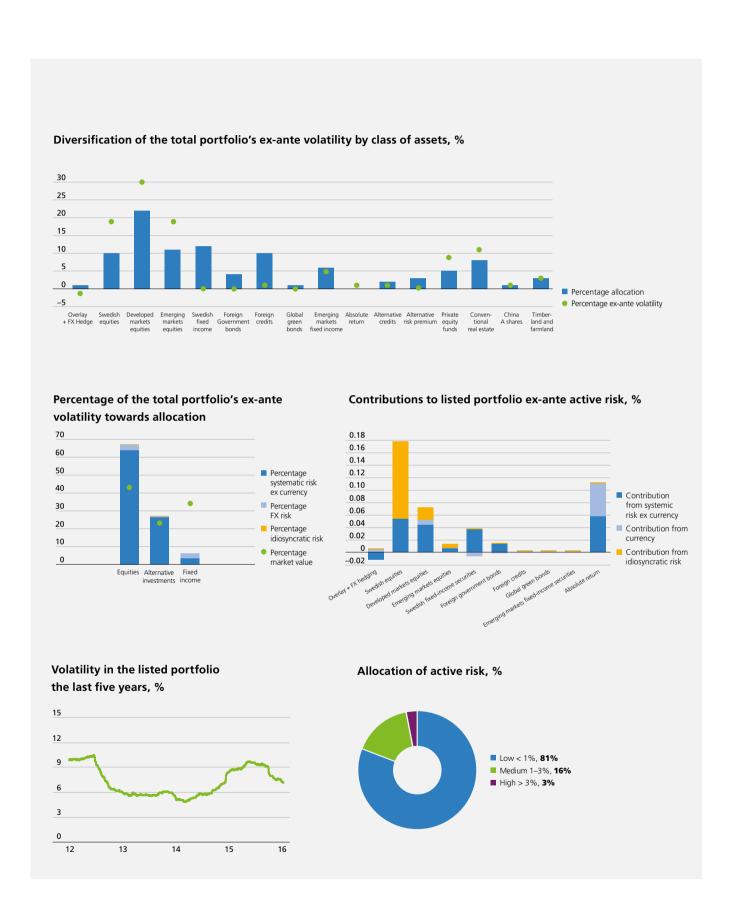
The listed portfolio's active ex-ante risk was 0.43 per cent at year-end. Swedish equities were the biggest risk taker with a contribution of 0.18 per cent, where the majority of risk was idiosyncratic. Absolute return mandates were the second biggest with a contribution of 0.11 per cent, where approximately half of the risk contribution was in currency and the other half of systematic risk excluding currency.

The Fund's risk measured 95 per cent 1 day's VaR amounted at the end of the year to approximately SEK 2.5 billion, corresponding to an annual volatility of SEK 24 billion. Therefore it is estimated that the Fund's results next year will end up between plus and minus SEK 24 billion (with a standard deviation probability) granted that the positions are not changed from the end of the year.

# Risk calculated as Value-at-Risk (VaR) for the Second AP Fund's total portfolio, 2016

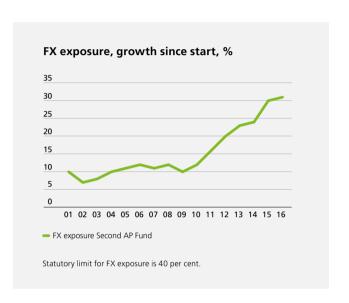
SEK million	Contribution to ex-ante VaR (95%, 1 day)	Contribution to ex-ante volatility (1 year)
Share risk	1 604	15 452
FX risk	179	1 726
Interest risk	74	711
Alternative investments	658	6 337
Total, Second AP Fund	2 515	24 226

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



# FX exposure

The degree of exposure in foreign exchange (FX) is a risk factor that can have an impact on the worth of all asset classes traded in currencies other than the Swedish krona. By the end of the year, 31 (30) per cent of the Fund's portfolio was exposed in foreign currency. The largest part was the Fund's exposure in USD, HKD and euros. The Fund's hedging policy is determined by the Board of Directors and is part of the portfolio optimisation process. This policy aims to reduce portfolio risk, and a systematic FX hedging programme is actively implemented. The portfolio's total FX exposure in 2016 has meant a positive net impact on the result, reflecting the steady weakening of the Swedish krona against other currencies. The hedging programme has had a negative impact on the net result. The Fund reported an overall positive result on FX transactions for its total portfolio, including FX hedging, amounting to SEK 8.7 (0.4) billion.



# FX exposure 2016 and 2015, equivalents in SEK million

31 December 2016	USD	HKD	EUR	JPY	BRL	INR	Other	Total
Equities and participations	80 185	7 375	16 074	8 583	2 237	2 320	35 125	151 899
Bonds and other fixed-income securities	43 953	_	16 216	_	2 404	_	18 542	81 115
Other assets and liabilities, net	-1 410	90	1 012	30	493	1 776	840	2 831
Derivatives excl. FX derivatives	9	-	268	6	-	-	-1	282
FX derivatives	-85 278	-64	-27 085	-2 984	64	528	-21 666	-136 485
FX exposure, net	37 459	7 401	6 485	5 635	5 198	4 624	32 840	99 642
31 December 2015	USD	EUR	HKD	JPY	INR	BRL	Other	Total
Equities and participations	69 790	16 785	7 275	8 455	2 322	1 670	36 016	142 313
Bonds and other fixed-income securities	32 974	12 329	_	_	_	2 080	15 793	63 176
Other assets and liabilities, net	-3	374	514	22	1 754	401	911	3 973
Derivative excl. FX derivatives	5	128	_	-5	_	_	_	128
FX derivatives	-79 110	-20 721	-516	-2 840	327	42	-17 772	-120 590
FX exposure, net	23 656	8 895	7 273	5 632	4 403	4 193	34 948	89 000

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

# OPERATING EXPENSES

# The well diversified portfolio is managed at a sustainable cost level

The path to the Fund's sophisticated portfolio has been supported by an internalisation process, which was initiated in 2012 and was completed in 2015. During the process, just over SEK 50 billion has been moved from external managers to the Fund's in-house portfolio management.

# Diversification is the goal

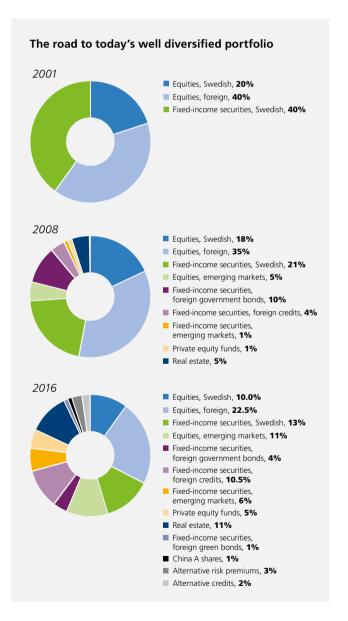
The work towards today's well diversified portfolio was started after it was stated in 2007 that the existing portfolio developed far too much in line with stock market fluctuations. After the financial crisis, the Fund's focus shifted from traditional diversification, where covariance in the portfolio was high, to find new independent return sources outside the traditional listed asset classes. The Fund's strategic portfolio was therefore refined and asset classes such as Chinese equities, alternative risk premiums and alternative credits have been added during the years.

The low interest rate environment of recent years has set new and challenging requirements for presence in more high return asset classes partly in new geographical areas. In order to achieve the Fund's profitability targets, the challenge today is therefore to balance the risk appetite the Fund will – and must – have with a cost level that the system can bear. This is without compromising either the transparency or the relevant requirements set on the basis of an ESG perspective. This is essentially the reason why the Second AP Fund initiated its internalisation process in 2012.

# Internalisation is the way ahead

During the period 2013–2015, the Fund reverted just over SEK 50 billion from external management. In particular, global credits and equities, as well as fixed-income securities in emerging markets have gradually been moved to in-house portfolio management over the years. In parallel with this, the internal organisation, along with resources, system support and information sources, have been adapted and supplemented in order to ensure quality and delivery in the portfolio management.

Implementing an internalisation process of this magnitude would have been impossible without the knowledge and culture



that characterises the Fund's organisation. Autonomous teams and individual members of staff who, over and above their specified responsibilities, shoulder responsibility for the entire business process and collaborate freely have been decisive to the successful implementation of this process.

Managing this increased capital in-house has resulted in significant cost savings. The Fund's well diversified portfolio is at a competitive cost level and is managed in a sustainable way. The asset management cost percentage has as a result of internalisation fallen to a level equivalent to 15 basis points – a level that is competitive even from an international perspective given the Fund's selected strategic portfolio. For 2016 the effect is visible in the form of net decrease of the Fund's total costs, both in absolute terms and expressed as a proportion of the assets under management.

# Cost comparison from a global perspective

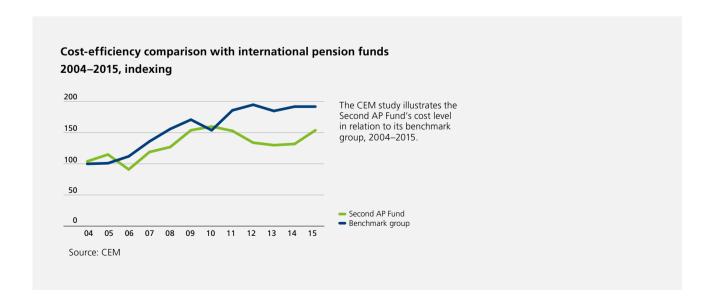
An established method for measuring and comparing the cost efficiency of pension funds from an international perspective has been developed by CEM (Cost Effectiveness Measurement Inc.). The method enables a comparison that takes into account several factors that have an impact on the overall cost of managing a fund: the volume of assets under management, the degree of assets under active management and external mandate, and the relative allocations for each class of asset.

In the study, a pension fund's costs are compared with those of an international group of fund managers of approximately the same size and with a portfolio of similar composition. The Second AP Fund has participated in CEM's annual benchmark study since 2004 and, according to the latest analysis, which covers 2015, the Second AP Fund's portfolio management continues to be successful and cost-efficient. The Fund's cost level is with a good margin still lower than the comparison group, which is mainly due a significantly lower proportion of external management and cost-effective in-house portfolio management. In order to equalise and compare the pension funds' costs, CEM's methodology is based on a transparency of different types of costs. The cost level is expected to be even more competitive for the year 2016, as a result of the full impact of internalisation.

# Implementation effects and rebalancing

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

The Second AP Fund employs a floating strategic benchmark index and the actual portfolio is adjusted daily to repli-



cate this. The strength of this management model is that the Fund's total capital is fully exposed on a daily basis. The costs and revenues attributable to strategic changes in the benchmark index, known as 'transitions', and the ongoing rebalancing of the strategic portfolio, are referred to as implementation effects. In 2016, these implementation effects totalled -0.06 per cent.

# Managing this increased capital in-house has resulted in significant cost savings.

## VAT

As of 2012, the AP Funds became VAT registered. Consequently, VAT is now liable on services charged from outside Sweden. Since the funds are not entitled to claim refunds on VAT paid, this VAT registration has led to a direct increase in the Fund's costs for such services. In 2016, these costs relating to VAT on services charged from outside Sweden amounted to SEK 39 (31) million.

# Cooperation between the Funds

During 2016, the Managing Directors for the First, Second, Third and Fourth AP Funds initiated an increased focus on cooperation between the Funds. The aim is to achieve greater cost efficiency, create synergies and to ensure a relevant exchange of experience, knowledge and working methods between organisations. Co-operation already takes place today in different established forums and will also be intensified on a project basis.

There are currently nine coordination groups with various compositions of representatives from the different AP Funds. In some of the groups the Sixth and Seventh AP Funds are also included while others consists only of the First, Second, Third and Fourth AP Funds. What these cooperation efforts have in common is that they are conducted based on the added value that the collaboration creates both for each individual fund and jointly for all funds. There are ongoing activities in these groups and the Funds also make public procurements within a number

The different coordination groups are the Ethical Council, Communication, Administration Managers, the Legal Group and Compliance, the Reporting Group, Risk & Performance, HR, the IT Management Group and the Back Office Group.

# Income statement

Amounts in SEK million	Note	Jan-Dec 2016	Jan-Dec 2015
Operating income			
Net interest income	1	1 818	1 897
Dividends received		6 432	5 458
Net result, listed equities and participations	2	8 139	3 608
Net result, non-listed equities and participations	3	3 923	3 934
Net result, fixed-income assets		2 179	-3 033
Net result, derivative instruments		-162	-62
Net result, exchange gain/loss		8 687	392
Commission expenses, net	4	-264	-321
Total operating income		30 752	11 873
Operating expenses			
Personnel expenses	5	-131	-126
Other administration expenses	6	-86	-86
Total operating expenses		-217	-212
NET RESULT FOR THE YEAR		30 535	11 661

# Balance sheet

Amounts in SEK million	Note	31 December 2016	31 Deecember 2015
ASSETS			
Equities and participation			
Listed	7	147 559	138 526
Non-listed	8	54 239	49 205
Bonds and other fixed-income assets	9	119 424	105 426
Derivative instruments	10	2 745	2 847
Cash and bank balances		2 328	3 991
Other assets	11	62	680
Prepaid expenses and accrued income	12	1 802	1 678
TOTAL ASSETS		328 159	302 353
FUND CAPITAL AND LIABILITIES			
Liabilities			
Derivative instruments	10	3 178	1 297
Other liabilities	13	17	163
Deferred income and accrued expenses	14	442	269
Total liabilities		3 637	1 729
Fund capital	15		
Fund capital at beginning of year		300 624	293 907
Net payments to the national pension system		-6 637	-4 944
Net result for the year		30 535	11 661
Total fund capital		324 522	300 624
TOTAL FUND CAPITAL AND LIABILITIES		328 159	302 353
Pledged assets, contingent liabilities and commitments	16		
Other assets pledged and comparable collateral		3 957	900
Commitments		25 453	24 798

# Accounting and valuation principles

The annual report shall be prepared in accordance with the "Act concerning National Pension Funds (2000:192)" and implemented in line with gener-ally accepted accounting principles, on the understanding that the assets in which the Fund's capital is invested shall be booked at market value. On this basis, the First to Fourth AP Funds have drafted and implemented joint accounting and valuation principles, as applied and summarised below.

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

# Transaction-date accounting

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

# Net accounting

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

# **FX** conversion

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

# Equities in subsidiaries/associated companies

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

# Valuation of financial instruments

All Fund investments are calculated at their fair value, whereby realised and unrealised changes in value are reported in the income statement. Consequently, realised and unrealised gains/losses per asset class are included under Net result. In cases where reference below is made to the selected index supplier, refer to page 14 of the annual report for information about current indices. For a description of how fair value is determined for the Fund's numerous investments, see below.

# Listed equities and participations

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

# Non-listed equities and participations

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

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

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

#### Bonds and other fixed-income securities

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

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

## Derivative instruments

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

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

# Buy-backs

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

#### Securities lending

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

# Items entered directly against Fund capital

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

# **Commission expenses**

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

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

# **Operating expenses**

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

# Tax

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

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

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

Net interest income

# Notes to the income statement and balance sheet

1 897

#### Net interest income/expense Amounts in SEK million Jan-Dec 2016 Jan-Dec 2015 Interest income Bonds and other fixed-income securities 3 262 2 611 Derivative instruments 551 239 Other interest income 81 70 Total interest income 3 894 2 920 Interest expenses -2054-990 Derivative instruments Other interest expenses -22 -33 **Total interest expenses** -2 076 -1 023

1 818

Net result, listed equities and participations					
Amounts in SEK million	Jan-Dec 2016	Jan-Dec 2015			
Net result, listed equities and participations	8 242	3 726			
less brokerage commission	-103	-118			
Net results, listed equities and participations	8 139	3 608			

Net result, non-listed equities and participations					
Amounts in SEK million	Jan-Dec 2016	Jan-Dec 2015			
Alloults III SEK IIIIIIIOII	Jan-Dec 2010	Jan-Dec 2013			
Capital gains, net	1 492	1 780			
Unrealised changes in value	2 431	2 154			
Net result, non-listed equities and participations	3 923	3 934			

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

During 2016, a total of SEK 204 (235) million has been paid in management fees for non-listed assets, of which SEK 198 (232) million admits repayment according to the principle above. During the year, SEK 171 (200) million was also repaid and the unrealised result for non-listed equities and participations have had a net negative effect of 27 (–32) million. Paid management fees where the contract does not allow repayment amounted to 6 (3) million and is recognised as commission expenses, see note 4, Commission expenses, below.

Commission expenses, net		
Amounts in SEK million	Jan-Dec 2016	Jan–Dec 2015
External portfolio management fees, listed assets	219	291
External portfolio management fees, non-listed assets	6	3
Other commission expenses including custodial expenses	39	27
Total commission expenses	264	321

Commission expenses do not include performance-based expenses. During the year performance-based expenses amounted to SEK 139 (144) million and reduced the net result for respective asset classes.

# cont. Note 4

# External mandates as per 31 December 2016, SEK million

Mandate		Average assets under management 2016	Market value 31 December 2016*	% of Fund capital	External management expense
External discretion	nary mandates	, werage assets ander management 2010	5. 5 ccc5c. 20.0	capital	слрепве
Equity mandates	-				
Active managemen	t				
MFS	Global equities	5 107	5 299		
APS	China A shares	2 057	2 148		
Cephei	China A shares	1 560	1 614		
UBS	China A shares	489	530		
Total external discr	etionary mandates	9 213	9 591	3	58
Investments in list	ed external funds				
Equity funds		9 825	10 741		55
Fixed-income funds		13 058	14 119		82
GTAA funds		1 416	1 577		24
Total investments	in listed external funds	24 299	26 437	8	161
Investments in non- timberland and farr	-listed private equity funds, mland	19 252	20 511	6	6
	SETS UNDER EXTERNAL ID MANAGEMENT EXPENSES	52 764	56 539	17	225

 $<sup>\</sup>mbox{\ensuremath{\star}}$  Market value including allocated liquidity, derivative instruments and accrued interest.

		2016		2015	
Number of employees	Total	Men	Women	Total Men	Womer
Average number of employees	67	44	23	67 44	23
Number of employees, 31 December	66	44	22	64 42	22
Number of persons in Executive Management Group, 31 December	7	5	2	7 5	2
Personnel costs in SEK thousands, 2016	Salaries and remuneration	Variable remuneration	Pension costs	Social costs incl. special employer's contribution	Tota
Chair of the Board	115	_	_	37	152
CEO	3 797	_	1 500	1 559	6 856
Board of Directors, excluding Chair	507	_	-	143	650
Executive Management Group excl. CEO					
Chief Investment Officer (CIO)	3 025		843	1 176	5 044
Head of IT, Business and Financial Control	1 678	_	782	717	3 177
Chief Investment Strategist (CIS)	2 438	-	664	929	4 031
General Counsel	2 235	-	577	760	3 572
Head of Communication & HR	1 785	_	642	611	3 038
Head of Performance & Risk Management	1 729	-	484	661	2 874
Other employees	51 663	5 447	18 788	22 385	98 283
Total	68 972	5 447	24 280	28 978	127 677
Other personnel costs					3 547
Total personnel costs					131 224
Personnel costs in SEK thousands, 2015	Salaries and remuneration	Variable remuneration	Pension costs	Social costs incl. special employer's contribution	Tota
Chair of the Board	115	_	_	37	152
CEO	3 495	_	1 474	1 479	6 448
Board of Directors, excluding Chair	505		-	136	641
Executive Management Group excl. CEO					
Chief Investment Officer (CIO)	2 974	-	780	1 157	4 911
Head of IT, Business and Financial Control	1 586	-	687	665	2 938
Chief Investment Strategist (CIS)	2 400	-	782	944	4 126
General Counsel	2 233	-	709	874	3 816
Head of Communication & HR	1 734	-	694	743	3 171
Head of Performance & Risk Management	1 644	-	540	647	2 831
Other employees	48 954	4 750	19 345	21 186	94 235
	65 640	4 750	25 011	27 868	123 269

# **Board of Directors**

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

the other directors. Work on the Audit Committee is remunerated as follows: SEK 20 000 to the Chair and SEK 15 000 to the other directors.

# Other directorships held by Members of the Board See page 78.

# CEO

In the CEO's contract of employment, the Fund undertakes to pay pension benefits and health insurance up to a pensionable age of 65 years, in the form

of an annual premium corresponding to 30 per cent of the gross salary. Where the contract of employment is terminated by the Fund, the CEO is entitled to a severance payment equivalent to eighteen months' salary, in addition to salary paid during the six month period of notice, less income from an eventual new appointment. The severance payment is calculated according to the cash monthly salary received at the end of the notice period. Benefits received by the CEO amount to SEK 7 (75) thousand.

#### **Executive Management Group**

In addition to salaries, other remuneration and pension contributions, the Executive Management Group has received benefits as per the following disclosure: Chief Investment Officer (CIO), SEK 66 (106) k; Head of IT, Business and Financial Control, SEK 0 (0) k; Chief Investment Strategist (CIS), SEK 6 (1) k; General Counsel, SEK 0 (0) k; Head of Communication & HR, SEK 0 (39) k and Head of Performance and Risk Management, SEK 0 (1) k. Members of the Fund's Executive Management are not covered by the terms of the programme for performance-based variable remuneration. Senior executives come under the terms of the retirement benefit agreement between BAO (The Employers' Organisation of the Swedish Banking Institutions) and JUSEK/CR/CF (SACO), The Swedish Confederation of Professional Associations. Swedish Government guidelines specify six months' notice and eighteen months' severance pay for senior executives. Two senior executives of the Second AP Fund, who were appointed before these Government guidelines came into force, are entitled to twelve months' notice without severance pay. These terms have not been renegotiated, as this would incur higher costs for the Fund.

#### Salary swap

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

# Variable remuneration

The Board of Directors has approved a programme for variable remuneration in line with Swedish Government guidelines. The Second AP Fund's incentive programme comprises all staff apart from the CEO and other members of the Executive Management. This incentive programme means that all those covered are entitled to a maximum of two months' salary in variable remuneration. The programme is linked to long-term goals. This variable remuneration may only be paid out when the Fund reports a positive return. The extent of the programme is presented on the Fund's website at www.ap2.se

# **Drafting and decision process**

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

# Government guidelines

For several years, the Second AP Fund has participated in the Willis Towers Watson salary and benefits survey. The purpose of this survey is to report on the market rate for salaries and benefits paid to different staff categories, based on data supplied by the participating companies. The Second AP Fund has used this statistical data to compare remuneration levels for all its employees. In 2016, the levels of remuneration provided by the Fund were compared with some 15 other private and state players in the financial sector, including Swedish pension fund AMF, the other AP Funds and Kammarkollegiet (Swedish Legal, Financial and Administrative Services Agency). The Fund's remuneration policy is based on the idea that the level of remuneration should be close to the median for the reference group employed in the Willis Towers Watson salary and benefits survey.

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

rable institutions, but are moderate in character and fall well within the parameters prescribed by the Board concerning staff remuneration. The Board is satisfied that the Fund is in compliance with Swedish Government guidelines on remuneration, apart from the above mentioned exceptions regarding the period of notice. Nevertheless, the combined costs incurred in connection with a dismissal are well within the limits defined in the Swedish Government guidelines. More information at www.ap2.se

# Other

To comply with GRI (Global Reporting Initiative) regulations, companies shall report the degree to which trade unions are free to operate and whether there are any employees of less than 18 years of age. In compliance with Swedish legislation, trade unions are free to operate at the Second AP Fund. The Fund has no employees under the age of 18.

Other administration expenses		
Amounts in SEK million	Jan–Dec 2016	Jan–Dec 2015
Rental expenses	5	5
Information and IT expenses	58	58
Purchased services	12	11
Other expenses	11	12
Total other administrative expenses	86	86
Fees to auditors		
Audit assignments		
PwC	0.71	0.61
Accounting activities in addition to audit assignments		
PwC	_	_

7 Equities and participations, listed		
Amounts in SEK million	31 December 2016	31 December 2015
Swedish equities	35 231	29 784
Foreign equities	100 010	97 947
Participations in foreign funds*	12 318	10 795
Total listed equities and participations	147 559	138 526
* of which participations in mixed funds	1 577	1 449

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

In 2016, total income from pledged securities amounted to SEK 41 million. This income made a positive contribution to the Fund's relative return and is reported as interest income in the income statement. The guarantees secured for securities on loan are reported in Note 16.

The 20 largest Swedish and foreign shareholdings, by value, are listed on pages 70–72.

A complete list of Swedish and foreign holdings may be found on the Fund's website at www.ap2.se

Amounts in SEK million	31 December 2016	31 December 2015
Equities in Swedish associated companies	13 771	15 520
Equities in foreign associated companies	18 744	15 261
Equities in other non-listed Swedish companies	0	1
Equities in other non-listed foreign companies	21 724	18 423
Total non-listed equities and participations	54 239	49 205

When determining the share of non-listed holdings in compliance with the statutory five-per cent limit, the calculated share amounted to 4.97 per cent on 31 December 2016. The share of listed securities in six private equity funds exceed 50 per cent, and are therefore not defined as nonlisted assets in the limit follow-up.

Result
*
*
10 916**

<sup>\*</sup> The equities in NS Holding were sold and Cityhold Property AB was liquidated during the financial year.

\*\* Refers to figures published as per 31 December 2016.

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

Amounts in SEK million	Registered office	Capital participation, %	31 Dec. 2016 Acquisition value	31 Dec. 2015 Acquisition value
Other non-listed Swedish equities and participations				
EQT Northern Europe KB	Stockholm	1	53	53
Swedstart Life Science KB	Stockholm	5	4	4
Swedstart Tech KB	Stockholm	3	3	3
Five largest shareholdings in other non-listed foreign equities and participations				
Pathway Private Equity Fund IXC	USA	99	1 059	1 010
Teays River Investments LLC	USA	7	665	665
Pathway Private Equity Fund IXB	USA	99	860	935
TPG Growth II, L.P.	USA	2	290	298
Khosla Ventures IV L.P.	USA	5	319	295

A complete list of Swedish and foreign non-listed shareholdings is available on the Fund's website at www.ap2.se

# Bonds and other fixed-income securities

	31 December 2016	31 December 2015
Amounts in SEK million	Fair value	Fair value
Swedish State	7 685	7 683
Swedish municipalities	148	145
Swedish mortgage institutions	20 259	19 712
Other Swedish issuers		
Financial companies	9 171	10 520
Non-financial companies	1 312	3 140
Foreign states	23 465	21 695
Other foreign issuers	57 380	42 527
Deposits	4	4
Total	119 424	105 426
Other bonds	104 197	89 917
Non-listed loans	1 104	3 000
Participations in foreign fixed-income funds	14 119	12 505
Deposits	4	4
Total	119 424	105 426

# Derivate instrument

	31 Decem	ber 2016	31 December 2015	
Amounts in SEK million	Fair value, positive	Fair value, negative	Fair value, positive	Fair value, negative
Equities-linked instruments				
Forward contracts	295	6	24	21
Total	295	6	24	21
of which cleared	295	6	24	21
Index-linked instruments				
Options, held	-	11	-	-
Options, pledged	13	-	-	-
FRA/Futures	33	68	38	26
Swaps	1	21	36	-
Total	47	100	74	26
of which cleared	45	79	38	18
Currency-linked instruments				
Options, held	6	-	6	-
Options, pledged	-	4	-	3
Forward contracts	2 397	3 068	2 743	1 247
Total	2 403	3 072	2 749	1 250
of which cleared	-	-	_	_
Total derivate instruments	2 745	3 178	2 847	1 297

Derivative positions with a negative value amounting to SEK 21 million have a longer duration than 12 months. These positions refer to swap contracts which are due in 2031.

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

# Use of derivative instruments

Derivative instruments are the primary means of hedging the Fund's portfolios. They also contribute to more efficient portfolio management, create added value and reduce risk. The Second AP Fund's employment of derivative instruments is governed according to the Fund's business plan. Restrictions include the injunction that call options and forward contracts may only be issued if adequate collateral is available in the form of holdings in underlying assets. During 2016, derivative instruments have principally been utilised in the following areas:

- Foreign exchange derivatives forward contracts and options for managing the Fund's FX exposure.
- Equity derivatives mainly standardised equity-index forward contracts

   for efficient rebalancing of the portfolio and when adopting positions
   in tactical asset allocation.
- Interest derivatives mostly standardised interest forwards and interest rate swaps – for rebalancing, tactical asset allocation and managing the Fund's interest risk. Limited utilisation of interest options to position the Fund in respect of interest risk.

- Structured derivatives used to create exposure to market fluctuations that are not available in traditional equities, interest or currency derivatives.
- The adopting of positions within the framework of the Fund's GTAA
  mandates, as well as alternative risk premium mandates, is handled with
  the help of derivatives. These mandates are able to act freely with the
  help of short and long positions in the permitted asset classes. This said,
  these mandates are not permitted to adopt a net long position.

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

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

# Other asset

Amounts in SEK million	31 December 2016	31 December 2015
Incoming payments, unsettled transactions	56	674
Other receivables	6	6
Total	62	680

# Prepaid expenses and accrued incom

Amounts in SEK million	31 December 2016	31 December 2015
Interest income accrued	1 339	1 418
Dividends accrued	337	170
Restitutions	113	73
Other prepaid expenses and accrued income	13	17
Total	1 802	1 678

# Other liabilities

Amounts in SEK million	31 December 2016	31 December 2015
Outgoing payments, unsettled transactions	2	136
Accounts payable	5	14
Other liabilities	10	13
Total	17	163

# Deferred income and accrued expenses

Amounts in SEK million	31 December 2016	31 December 2015
Accrued external management fees	39	46
Accrued interest expenses on currency forwards	370	194
Other accrued expenses	33	29
Total	442	269

# Fund capita

Amounts in SEK million	31 December 2016	31 December 2015
Opening Fund capital	300 624	293 907
Net inflows to the national pension system		
Pension contributions received	64 174	61 373
Pension disbursements to the Swedish Pensions Agency	-70 595	-66 141
Transfer of pension entitlements to EC	-1	-2
Adjustment of pension entitlements regarding previous years	1	2
Administration contribution to the Swedish Pensions Agency	-216	-176
Total payments to the national pension system, net	-6 637	-4 944
Net result for the year	30 535	11 661
Closing Fund capital	324 522	300 624

# Pledged assets, contingent liabilities and commitments

Amounts in SEK million	31 December 2016	31 December 2015
Other pledged assets and comparable collateral		
Securities on loan for which guarantees have been secured in the form of securities and cash*	3 598	559
Securities pledged in connection with exchange-cleared derivatives	359	269
Securities pledged in connection with OTC-derivatives (CSA/Credit Support Annex agreement)	-	72
Commitments		
Commitments regarding future payments, non-listed holdings	20 953	20 298
Subscription commitments, certificates	4 500	4 500

<sup>\*</sup> Guarantees secured for securities on loan: SEK 3 845 (598) million.

# 17 $\scriptstyle{f E}$

# Financial instruments, price and valuation hierarchy

## Valuation of Fund capital - Market-listed assets

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

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

When it comes to other OTC derivatives, the appraisal is handled exclusively by external parties, without subjective input from the Fund. At year end 2016, the Fund's portfolios contained only a few outstanding structured OTC derivatives.

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

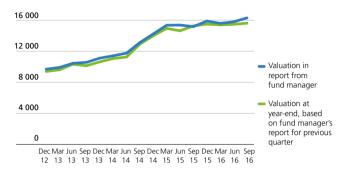
# Valuation of Fund capital – Alternative investments

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

Fair value is deemed to be the market rate at which a transaction between informed and mutually independent parties can be completed. In the case of the Second AP Fund, these non-market-listed assets consist of non-listed real-estate assets (about twelve per cent of the total portfolio), private equity funds (almost five per cent of the total portfolio) and OTC derivatives.

#### Cont. Note 17

# Validation of valuations in private equity funds, SEK million



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

Private equity funds are appraised in accordance with the IPEV (International Private Equity and Venture Capital Valuation) Guidelines or equivalent valuation principles and shall first and foremost be based on transactions with third parties, although other valuation methods may be used.

In calculating fair market values, private equity funds rely mainly on discounted cash flows, the material value method and multiple valuation. Valuation of holdings is based on the most recent interim reports published by individual private equity funds. Interim reports are normally available within 90 days of the last quarterly financial statement. This means that Fund holdings valued at year-end 2016 were based mainly on an appraisal of private equity funds made on 30 September 2016, adjusted for in- and outflows during the fourth quarter. This method of appraisal has been applied consistently by the Second AP Fund, right from the start.

An analysis of the relative impact of this time-lag since December 2012 reveals that the Fund's valuation, as shown in the official year-end accounts, has in all essential respects been lower than the value declared in the final report submitted by the private equity fund managers. A third party assessment of market growth during the fourth quarter of 2016 confirms that private equity funds in the Fund's key geographic markets enjoyed continuing positive growth during the final quarter.

# Fair value

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

For this reason, the Fund's holdings are sorted at three different levels and classified according to the in-data used for the appraisal. The Second AP Fund classifies its assets at fair value as per the hierarchy shown.

# Fair value hierarchy, SEK million

	31 December 2016			
	Level 1	Level 2	Level 3	Total fair value
Equities and participations, listed	135 082	12 477	0	147 559
Equities and participations, non-listed	_	_	54 239	54 239
Bonds and other fixed-income assets	103 949	14 371	1 104	119 424
Derivative assets	340	2 405	-	2 745
Derivative liabilities	-86	-3 092	-	-3 178
Financial assets and liabilities, valued at fair value	239 285	26 161	55 343	320 789*

	31 December 2015			
	Level 1	Level 2	Level 3	Total fair value
Equities and participations, listed	127 508	11 018	0	138 526
Equities and participations, non-listed	_	_	49 205	49 205
Bonds and other fixed-income assets	89 917	12 509	3 000	105 426
Derivative assets	62	2 785	_	2 847
Derivative liabilities	-39	-1 258	_	-1 297
Financial assets and liabili- ties, valued at fair value	217 448	25 054	52 205	294 707*

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

**Level 1:** Financial instruments traded on an active market. The market is deemed active if it features listed rates that are subject to regular update at a higher frequency than once weekly, and if these rates are employed unadjusted at closing.

Level 2: Financial instruments traded on a market not deemed as active, but that features listed rates that are employed unadjusted at closing or observable in-data that is regularly updated for indirect valuation based on generally accepted models.

**Level 3:** Financial instruments that are valued on the basis of a not insignificant amount of non-observable data, or that otherwise cannot be classified as Level 1 or Level 2.

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

# Change during 2016 in Level 3, SEK million

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

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

#### Cont. Note 17

# Change during 2015 in Level 3, SEK million

	Equities and participations, listed	Equities and participations, non-listed	Bonds and other fixed-income assets	Total
Value brought forward, January 2015	23	39 783	3 320	43 126
Purchases	14	5 353	-	5 367
Divestments	-	_	-318	-318
Changes in value	-37	4 069	-2	4 030
Reclassifications	-	_	_	_
Total	_	49 205	3 000	52 205

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

# Sensitivity analysis, non-listed assets

## Timberland and farmland

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

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

# Private equity funds

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

- · profit growth in the company, improved sales and EBITDA
- multiple expansion, improved margins
- reduced debt
- increased market shares, development of products and services (geographic expansion, technical advances, unique/new range of products/services).

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

## Traditional real estate

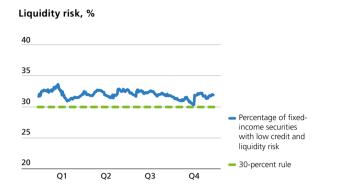
Although many different factors can affect the performance and financial status of real-estate companies, the growth in the value of the companies' real estate portfolios constitutes the greatest risk and has the greatest impact on their net result. The market value of real estate is affected by changed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

Concerning the Second AP Fund's holdings in traditional real-estate companies, the combined effect on the Fund's share in profits of a planned change in the direct yield requirement of +/- 0.25% on companies' reported pre-tax results is estimated at SEK -2.1 billion and SEK +2.3 billion respectively.

# Financial risk

The liquidity risk is limited, among other things, by the 30-per cent rule (external investment regulations for AP1-AP4, which specify that a minimum 30 per cent of the funds' total capital shall be invested in securities with a low credit and liquidity risk) and that no more than five percent of the Fund's total assets may be invested in private equity funds. During 2016, the Fund's share in securities with a low credit and liquidity risk was around 31–33 per cent. By year-end, its share of non-listed assets was 4.97 per cent. The liquidity risk on the liability side is very limited, consisting of derivative liabilities.

For further risk data, see "Good spread of risk in the portfolio", pages 42–47.



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

				Amount not net-acc				
31 December 2016	Gross amount	Net-accounted amount in balance sheet	Net amount in balance sheet	Set-off of financial instruments per agreement	Collateral received	Net amount post offset	Other*	Total in balance sheet
ASSETS								
Derivatives	2 403	_	2 403	-1 126	-495	782	342	2 745
Total	2 403	_	2 403	-1 126	-495	782	342	2 745
LIABILITIES								
Derivatives	3 093	_	3 093	-1 126	_	1 967	85	3 178
Total	3 093	-	3 093	<b>-1 126</b>	-	1 967	85	3 178
				Amount not net-accounted in balance sheet				
31 December 2015	Gross amount	Net-accounted amount in balance sheet	Net amount in balance sheet	Set-off of financial instruments per agreement	Collateral received	Net amount post offset	Other*	Total in balance sheet
ASSETS								
Derivatives	2 785	_	2 785	-654	-191	1 940	62	2 847
Total	2 785	-	2 785	-654	-191	1 940	62	2 847
LIABILITIES								
Derivatives	1 250	_	1 250	-654	-72	524	47	1 297
Total	1 250	_	1 250	-654	-72	524	47	1 297

<sup>\*</sup> Other instruments in the balance sheet that are not subject to right of set-off.

# Related pa

This note is intended to clarify how the Second AP Fund's result and financial position has been affected by transactions and accounts outstanding, including commitments, with related parties in compliance with the definitions cited in IAS (International Accounting Standard) 24, "Related Party Disclosures".

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

Amounts in SEK million	31 December 2016	31 December 2015
Related parties, voting rights		
Vasakronan Holding AB, 25 per cent		
Interest income	147	215
Shareholder loan	-	3 000
Shareholders' contribution	3 000	_
Commitment on Vasakronan's behalf to purchase commercial paper in the company, on each occasion, to a maximum combined liquid amount of	4 500	4 500
Chaptwo S.à.r.l., 100 per cent		
Interest income	71	_
Shareholders' contribution	93	4
Investment commitment	2 395	2 229
Cityhold Property AB, 50 per cent*		
Interest income	_	19

<sup>\*</sup>The company was discontinued during the year.

# The administration report, income statement, balance sheet and notes for 2016 have been approved by the Board of Directors.

Gothenburg, 8 February 2017

Marie S. Arwidson
Chair

Sven Björkman
Vice Chair

Ola Alfredsson

Jeanette Hauff

Ole Settergren

Johnny Capor

Kristina Mårtensson

Ulrika Boëthius

Christer Käck

Our audit report was submitted on 8 February 2017

Sussanne Sundvall

Authorised Public Accountant

Appointed by the Swedish Government

Peter Nilsson

Authorised Public Accountant

Appointed by the Swedish Government

# Auditor's Report

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

# Report on the audit of the annual accounts

#### Opinion

We have audited the annual accounts of the Second AP Fund for 2016. The Fund's annual accounts are included in the printed version of this document on pages 31–67.

In our opinion, the annual accounts have been prepared in accordance with the Swedish National Pension Funds Act (2000:192) and present fairly, in all material respects, the financial position of the Second AP Fund as at 31 December 2016 and of its financial performance for the year then ending according to the Swedish National Pension Funds Act.

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

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

# Basis for opinion

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

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

# Other information than the annual accounts

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises pages 1–30 and 70–80 (but does not include the annual accounts and our auditor's report thereon).

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

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

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

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

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

## Auditor's responsibilities

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

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

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

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

We are required to inform the Board of 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 significant deficiencies in the internal control which we identify during our audit.

# Report on other legal and regulatory requirements Opinion

In addition to our audit of the annual accounts, we have also audited the inventory of the assets managed by the Second AP Fund. We have also audited to determine if there are any criticisms, in general, as regards the Board of Director's and Managing Director's management of the Second AP Fund for 2016.

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

# Basis for opinion

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

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

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

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

## Auditor's responsibilities

Our responsibility regarding the audit of the administration and, thereby, our opinion on discharge from liability, is to evaluate audit evidence in order to, with a reasonable degree of assurance on the basis of reasonable assurance, if there is any criticism of the Board of Directors' and Managing Directors' administration of the the Second AP Fund for financial year 2016.

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

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

Gothenburg, 8 February 2017

Sussanne Sundvall
Authorised Public Accountant
Appointed by the Swedish Government

Peter Nilsson

Authorised Public Accountant

Appointed by the Swedish Government

# Equities, participations and fixed-income securities

# The Second AP Fund's 20 largest Swedish shareholdings\*

Company name	Share of equity, %	No. of equities	Market value, SEK million	Share of voting rights	Sector
Assa Abloy B	0.54	5 794 250	980	0.46	Industrials
Atlas Copco A	0.34	4 192 554	1 163	0.48	Industrials
Atlas Copco B	0.18	2 208 212	549	0.03	Industrials
Boliden	0.76	2 077 515	494	0.76	Raw materials
Castellum	5.56	15 199 001	1 898	5.56	Financials
Elekta B	2.79	10 663 202	859	2.09	Healthcare
Hennes & Mauritz B	0.49	8 156 280	2 067	0.24	Consumer discretionary
Hexagon B	0.92	3 299 042	1 074	0.66	IT
Husqvarna B	1.64	9 581 026	679	0.57	Consumer discretionary
Investor A	0.00	38 110	13	0.01	Financials
Investor B	0.43	3 290 804	1 121	0.09	Financials
Kindred Group Plc	5.67	13 042 734	1 116	5.67	Consumer discretionary
Nordea Bank	0.54	22 034 681	2 232	0.54	Financials
Sandvik	0.68	8 566 599	965	0.68	Industrials
SCA Sv Cellulosa A	0.03	234 618	60	0.18	Consumer discretionary
SCA Sv Cellulosa B	0.79	5 605 194	1 442	0.44	Consumer discretionary
SEB A	0.74	16 185 336	1 547	0.75	Financials
SKF B	0.73	3 348 325	561	0.42	Industrials
Swedbank A	0.90	10 188 917	2 245	0.90	Financials
Swedish Match	1.99	3 760 401	1 090	1.99	Consumer discretionary
Tele2 B	2.24	11 344 334	829	1.65	Telecoms
Trelleborg B	1.65	4 472 136	802	0.85	Industrials
Volvo A	0.06	1 282 934	138	0.19	Industrials
Volvo B	0.54	11 450 620	1 218	0.17	Industrials

<sup>\*</sup> The above table lists the Second AP Fund's 20 largest holdings in Swedish equities, by worth.

A complete list of the Second AP Fund's holdings may be found on the Fund's website at www.ap2.se

# The Second AP Fund's holdings in unit trusts

Name	No. of equities, participations	Fair value, SEK million
GAM FCM Cat Bond Inst Initial Series	2 413 629	3 293
Babson Capital	3 026 617	2 743
Genesis Emerging Markets Class A	5 475 561	2 607
Generation IM Global Equity A Shares LTA20 090401	875 978	2 474
Ares Strategic Investment Partners IV	250 000 000	2 444
AQR Merger Arbitrage fund	1 676 319	1 672
Generation IM Global Equity Fund Class I 20071201	560 582	1 619
Bridgewater GTAA Fond	75 115	1 482
Elementum Zephyrus Total Return Cat Bond	123 931	1 242
CS Iris S Fund Ltd.	115 143	1 117
CVC Credit Partners	1 000 000	1 116
AQR Opportunis Convertible Arbitrage Offshore Fund	1 077 776	1 034
AQR Emerging Equities Fund, L.P.	1 070 000	995
Generation IM Global Equity Fund Class I 20090401	283 704	825
GSO Global Dynamic Credit Feeder Fund Ireland A	754 861	737
Generation IM Asia Fund	477 988	550
MG Lion Credt Opp Fund XIV – Series 1 Share Class	39 000	395
Bridgewater GTAA Fond Major Market 1100-031	5 655	93
GAM FCM Cat Bond 2016 series 1	2 125	2
GAM FCM Cat Bond 2016 series 4	1 538	1
GAM FCM Cat Bond 2016 series 10	1 527	1
GAM FCM Cat Bond 2016 series 7	1 482	1
State Street Short Liquidity Fund	181 441	0

# The Second AP Fund's 20 largest foreign shareholdings\*

Company name	No. of equities	of equities Market value, SEK million Sector	
AstraZeneca	1 256 393	625	Healthcare
Samsung Electronics Co Ltd	43 856	594	IT
Taiwan Semiconductor Manufacturing Co Ltd	11 475 000	587	IT
Tencent Holdings Ltd	2 566 100	570	IT
Nestlé	775 390	515	Consumer discretionary
Johnson & Johnson	393 319	412	Healthcare
At&T	1 023 200	395	Telecoms
Alibaba Group	482 700	385	IT
Verizon Communications	711 800	345	Telecoms
Pepsico	348 500	331	Consumer discretionary
Proctor & Gamble	422 100	322	Consumer discretionary
Reckitt Benckiser Group	392 892	304	Consumer discretionary
China Mobile	3 098 500	299	Telecoms
Roche Holding	142 563	299	Healthcare
China Construction Bank	42 542 000	298	Financials
Bayer	306 055	291	Healthcare
Automatic Data Process	305 500	285	IT
ABB Ltd	1 486 399	285	Industrials
United Parcel Service	265 536	277	Industrials
General Mills	484 200	272	Consumer discretionary

<sup>\*</sup> The above table lists the Second AP Fund's 20 largest holdings in foreign equities, by worth.

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

A complete list of the Second AP Fund's holdings may be found on the Fund's website at www.ap2.se

# The Second AP Fund's holdings in bonds and other fixed-income securities

Swedish nominal bonds, five largest holdings

Bond	Fair value, SEK million	
Swedish Government 1054	4 418	
Nordea Hypotek AB #5529	4 235	
Nordea Hypotek AB #5521	2 065	
Stadshypotek AB #1581	1 800	
Länsforsäkringar #513	1 688	

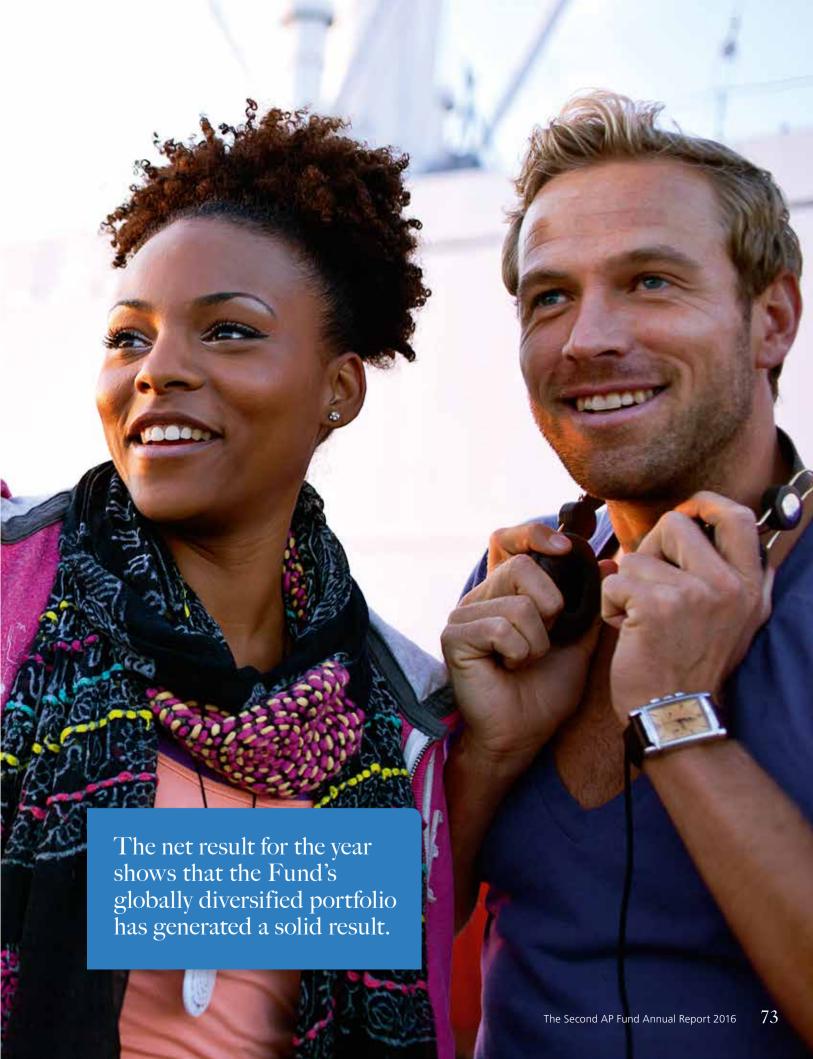
Global government bonds, five largest holdings

Bond	Fair value, SEK million	
European BK Recon & Development	261	
Spain Gov	239	
Exp-Imp BK Korea	228	
BK Ned Gemeenten	227	
Kommunalbanken	226	

## Global credits, five largest holdings

Bond	Fair value, SEK million
Intel Corp	420
Credit Suisse	236
UBS AG London	212
Kinder Morgan	210
Gilead Sciences	194

Detailed information about the Second AP Fund's holdings in fixed-income securities is available on the Fund's website at www.ap2.se



# Fund Governance Report

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

The Code sets the tone for what shall be considered good practice for corporate players on the Swedish stock market. This Fund governance report has derived inspiration from the Code of Corporate Governance, while also taking into account the special characteristics that apply to the AP Funds.

Like the other AP Funds, Second AP Fund is a state agency. Even so, the difference between the AP Funds and other state agencies is considerable. The greatest difference is that the AP Funds enjoy a high degree of independence from the Swedish Government, because their operations are almost exclusively governed by law and the Government thereby has no provision in law to exercise control over them.

#### The Board of Directors

The Board of Directors of the Second AP Fund, which is appointed by the Swedish Government, comprises nine members. Two are appointed in accordance with proposals submitted by organisations that represent employees' interests, two in accordance with proposals submitted by organisations that represent employers' interests.

The Chair and Vice Chair are appointed by the Government, selected from the Members of the Board not put forward by employer or employee organisations.

Each director shall be appointed on the basis of his/her individual ability to enhance the management of the Fund.

On 19 May 2016, the Government decided on a new Board without any change compared with the previous year. To date, the Government has chosen to implement twelve month mandate periods for Board Members, whereby current appointments remain in effect until the Fund's income statement and balance sheet for 2016 have been adopted.

The Board has full and undivided responsibility for the operations of the Fund, within the parameters established by the Swedish Parliament concerning the organisation of the Fund and management of its assets. In instances where the work of the Board falls outside the terms of the Swedish National Pension Funds Act, it is governed by the rules of procedure annually adopted by the Board.

Fees and other remuneration paid to Board Members are determined by the Swedish Government. The remuneration paid per annum amounts to SEK 100 000 for the Chair, SEK 75 000 for the Vice Chair and SEK 50 000 for the other Members of the Board. The Government has determined that payments amount-

Member of the Board	Remuneration Committee	Risk Committee	Audit Committee	Attendance/ total meetings
Marie S. Arwidson	X		Х	9/9
Sven Björkman	X	Х		9/9
Jeanette Hauff		X		9/9
Ola Alfredsson				6/9
Ole Settergren				9/9
Ulrika Boëthius				9/9
Christer Käck				8/9
Johnny Capor			Х	9/9
Kristina Mårtensson				7/9

ing to SEK 100 000 in total may be made for committee work. No fees have been paid for work conducted by Board Members on the Remuneration Committee. For work on the Risk Committee, remuneration has been paid to the Chairman in an amount of SEK 30 000 and to individual members in amounts of SEK 25 000. For work on the Audit Committee, remuneration has been paid in an amount of SEK 20 000 to the Chair and in amounts of SEK 15 000 to individual Members.

#### The work of the Board

The most important tasks assigned to the Board of the Second AP Fund involve the establishment of operational targets, the recruitment and evaluation of the CEO and the taking of decisions concerning broad strategic issues, such as the composition of the Fund's strategic portfolio. To ensure that the Board's decisions are implemented, that intrinsic risks are managed and that the Fund's operations are in all other respects conducted in an appropriate manner, effective control and follow-up are essential. During the year, the Board held six ordinary meetings and three extraordinary meetings. The extra meetings were held in relation to the sale of the Fund's holdings in Norrporten. In October a longer meeting was held which addressed broad strategic issues, with special emphasis on investment strategy, in particular that of investment in emerging markets. As well as Board Members, Board meetings are attended by the Fund's CEO and the Secretary to the Board. Other Fund employees may also participate, in an advisory role as experts or to submit a report on a given issue. The CEO's performance is evaluated once a year. The CEO does not attend this meeting.

# Fund targets

The Fund is committed to minimising the consequences that derive from activation of the automatic balancing mechanism, by generating a solid return on invested capital. To meet this requirement, the Second AP Fund has composed a portfolio that is expected to generate an average annual real return of 4.5 per cent over the long term.

Strategic portfolio

A new strategic portfolio has been approved for 2017.

Discussion about performance, governance issues and costs
The Fund's management performance is reviewed at every
Board meeting. The Board regularly discusses fundamental sustainability and governance issues, the strategic allocation of assets and investments in private equity funds and real estate.
Cost trends are considered on a quarterly basis, and the Board regularly reverts to the issue of the Fund's cost efficiency. Its annual responsibilities include decisions concerning the adoption of the year-end accounts, the budget, business plan and strategic portfolio.

#### **Board committees**

The Board has established a Remuneration Committee. The Remuneration Committee consists of the Fund's Chair and Vice Chair. The CEO is normally co-opted to meetings of the Remuneration Committee. The CEO is not present when the Committee determines his/her remuneration.

The Remuneration Committee is a drafting committee for the Board, tasked with considering the level of remuneration for the CEO, establishing guidelines for the remuneration of the Fund's executive management and determining issues related to incentive programmes for Fund employees. Swedish Government guidelines on terms of employment for AP Fund employees are monitored and checked against the Fund's own guidelines and to ensure their correct implementation. Decisions reached by the Remuneration Committee are submitted for consideration by the Board at its next meeting.

The Board has established a Risk Committee. The Risk Committee has been established as an advisory, supervisory and preparatory body for the Board concerning the Fund's risk control and risk management activities. The Risk Committee comprises two Members of the Board. The items placed before the Committee for consideration are presented by the Fund's CEO and the Head of Performance and Risk Management.

The Risk Committee is not authorised to make decisions on behalf of the Board or Fund, except in those cases where such authority has been delegated by the Board. The responsibility of the Board and its individual directors is in no way limited by the establishment of the Risk Committee or its duties. The operations of the Committee, which meets at least six times a year, are conducted according to an agenda determined by the Board on an annual basis. During 2016, among other activities, the Risk Committee has reviewed developments concerning the Fund's financial and operational risks, as well as reviewing its benchmark indices and alternative investments. The ESG risks within certain asset classes have been discussed. The Fund's latest risk status was also presented and discussed at each of these meetings.

The Board has established an Audit Committee. The Audit Committee has been established as an advisory, supervisory and preparatory body for the Board in the areas of financial reporting, auditing, internal control and internal and external auditing. The Audit Committee comprises two Members of the Board. The items placed before the Committee for consideration are presented by the Fund's CEO, the Head of Business Control and the Chief Financial Officer (CFO), as well as the Fund's auditors.

The Audit Committee is not authorised to make decisions on behalf of the Board or Fund, except in those cases where such authority has been delegated by the Board. The responsibility of the Board and its individual directors is in no way limited by the establishment of the Audit Committee or its duties. The Audit Committee has met four times during 2016, one meeting being held jointly with the Board's Risk Committee for the annual review of the Fund's progress on operational risk. During the year, the work of the Committee has concentrated on the

Fund's implementation of a new internal audit function, issues related to investments in non-listed assets, the ongoing work on operational risks as well as reporting by, and the conducting of discussions with, the Fund's auditors.

#### **Evaluation of Board performance**

The performance of the Board is subject to annual evaluation. This evaluation, which at year-end 2015 was conducted in the form of a questionnaire, was deliberated by the Board both at its April meeting and at the longer strategy meeting in October. Considerable emphasis is placed on continually developing the work of the Board, which already functions well, as well as collaboration with the Fund's executive management.

#### **Audit**

The Second AP Fund's auditors are appointed by the Swedish Government. The current mandate, which came into effect on 19 May 2016, is shared by Sussanne Sundvall and Peter Nilsson from PwC. PwC is also tasked with conducting the audits of the other AP Funds, and Sussanne Sundvall has furthermore been appointed to coordinate the audits of all AP Funds. This mandate applies until adoption of the Fund's income statement and balance sheet for 2016.

The auditors submit an audit report, as well as making an oral report direct to the Board at least once a year. They also submit written reports concerning their audit of the annual accounts and management administration. The auditors also submit a report to the Ministry of Finance once a year.

The auditors' assignment includes inspection of current business operations, the administration, the annual accounts and

the annual report. The auditors express their opinion of the annual accounts and administration, based on their audit. This assignment also includes an assessment to determine that the accounts of the Second AP Fund have been prepared in compliance with the accepted accounting and valuation principles jointly determined by the AP Funds, and that they provide a true and fair picture of the Fund's financial position.

The audit has also involved an examination of the Fund's guidelines on remuneration in compliance with Swedish Government guidelines on remuneration to key executives and employees, and compliance with these. A separate statement has been submitted, see the Second AP Fund website at www.ap2.se

#### Internal control

The Board has ultimate responsibility for the Fund's internal control. In the Fund's risk policy, the Board has established frameworks and guidelines for the overall allocation of responsibilities, risks, risk limits and routines to monitor and control that such guidelines are observed.

The CEO is responsible for ensuring that the operations are performed within the specified frameworks and investment provisions and that monitoring and follow-up take place on a daily basis. In order to ensure that the Second AP Fund's risk management and control environment are secured in a structured manner, the Fund works according to the principle of the "Three lines of defence". Asset Management which, according to the model, is primarily considered to be the first line of defence, is responsible for the risk. This means that one have the delegated responsibility to implement the Fund's decided

risk strategy and to ensure that the Fund stays within the defined limits as required by law, determined by the Board or that apply to the Fund's activities through other decisions.

The second line of defence consists primarily of the functions of Risk Management and Compliance which, among other things, monitors, checks and reports the Fund's risks and how the Fund follows internal and external regulations. The Department is organisationally independent of functions that are engaged in active trading decisions. This risk control process is based on the generation of effective and transparent risk reports and analyses. Reporting to the Fund's executive management is conducted on a daily basis, while regular updates are submitted via reports to the Board and at meetings of the Risk Committee and at Board meetings. The Compliance function is tasked with ensuring that the Fund fully complies with the regulations governing its activities. This includes monitoring changes to pertinent regulations and disseminating information about these throughout the Fund, through training, policy statements and by other means. During the year, a compliance legal adviser has been appointed, new policies have been developed with respect to new or changed regulations and several training courses have been completed.

The third line of defence consists of an external independent internal audit function which evaluates and improves efficiency in a systematic and structured way in the Fund's risk management, internal control and management processes. A decision on annual internal audit missions will be taken by the Board. Reporting the results from the internal audit will take place for the executive management, the Risk and Audit Committees and the Board of Directors at the frequency each body establishes.

# **Board of Directors**



Marie S. Arwidson
Chair since 2010. MSc (Econ). Formerly Managing Director of the Swedish Forest Industries Federation. Member of the Board of Rottneros AB and member of the Royal Swedish Academy of Engineering Sciences. Born 1951.



Sven Björkman
Vice Chairman since 2009. Former Head
of SEB Region Väst. Chairman of Shepherd
of Sweden AB. Born 1949.



Jeanette Hauff
Member of the Board since 2010. Ph.D in Economics. Lecturer at Gothenburg University's School of Business, Economics and Law, and the University of Borås. Member of the Board of QQM Fund Management AB. Born 1965.



Ola Alfredsson Member of the Board since 2010. Embassy counsellor at the Swedish embassy in Washington. Born 1964.



Ole Settergren

Member of the Board since 2013. Head of
Pensionsmyndighetens utvecklingsavdelning
(The Swedish Pensions Agency Development
Unit). Born 1964.



Ulrika Boëthius

Member of the Board since 2012. Chair of Finansförbundet (The Financial Sector Union of Sweden). Member of the Boards of TCO (Confederation of Professional Employees), NFU (Nordic Financial Unions), CEFIN (Centre for Banking and Finance) at KTH. Born 1961.



Johnny Capor

Member of the Board since 2014. Former
Deputy Managing Director and CFO of KF/
Coop. Member of the Board of Folksam Liv.
Born 1966.



Kristina Mårtensson

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



Christer Käck

Member of the Board since 2014. M.Sc.
(Econ). Self employed. Member of the
Investment Advisory Board for the Stockholm
County Council Foundations. Born 1953.

# **Executive Management**



Eva Halvarsson CEO. Employee since 2006. Other directorships: Vasakronan AB, FinansKompetens Centrum and UN PRI. Vice Chancellor of Gothenburg University. Born 1962.



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



Ola Eriksson Head of IT, Business Control and Accounts. Employed since 2001. Other directorships: Centre for Finance (CFF) at the School of Business, Economics and Law, Gothenburg University. Born 1965.



Hans Fahlin Chief Investment Officer (CIO). Employed since 2010. Other directorships: AFS Interkulturell Utbildning Sverige and the Centre for Finance (CFF) at the School of Business, Economics and Law. Gothenburg University: member of the Polar Music Prize Administrative board, member of the board of STIM and Chairman of the Institute of Quantitative Research Europe (INQUIRE). Born 1957.



Martin Jonasson General Counsel. Secretary to the Board. Employed since 2001. Other directorship: member of the board of ETC Battery and FuelCells Sweden AB. Born 1964.



Henrik Westergård Head of Performance and Risk Management. Employed since 2012. Born 1973.



The Board of Directors of the Second AP Fund, which is appointed by the Swedish Government, comprises nine members.

# Auditors Sussanne Sundvall, Authorised Public Accountant, PwC. Peter Nilsson, Authorised Public Accountant, PwC.

Tomas Franzén, the Second AP Fund's Chief Strategist, retired from the Fund in December 2016.

# **Definitions**

#### Absolute return on investment

The return generated on a portfolio or portfolios of assets, measured in kronor or per cent, of the original invested amount.

#### Active/passive management

Active management: Portfolio management actively deviates from the benchmark index, to generate an active return.

Passive management: Portfolio management strives for a return equal to benchmark portfolio.

#### Active risk/Tracking error

The variation in relative return. Often measured as standard deviation on the relative return. Active risk is calculated using daily data to determine relative return.

#### ALM study

Asset Liability Modelling. An analytical model used to determine the Fund's strategic portfolio. The study, which is revised on a continual basis, is designed to determine the optimal composition for the different classes of asset under Fund management, to ensure that it satisfies the Fund's long term commitment to the collective requirements of the Swedish national pension system. The judgements based on this analysis shall take into account demographic change as well general economic trends.

#### Benchmark index

Index based on the Second AP Fund's strategic portfolio, against which the Fund's management performance is measured.

#### Carbon footprint

'Carbon footprint' is the term used to describe a company's or portfolio's combined carbon dioxide emissions.

#### Credit risk/counterparty risk

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

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

#### CSA contract

An annex to the ISDA contract which regulates how the party that has an outstanding debt (unrealised loss) must pledge a security for the loss in the form of cash and cash equivalents or securities.

## **Discretionary mandate**

A mandate that is limited and specific to a single investor. The alternative to discretionary management is traditional fund management.

#### Duration

A measure of interest risk that yields an asset-relative change in value with an interest adjustment of one percentage unit.

### Ex-ante

Projected calculations that look ahead in time.

#### Ex-post

Calculations from the realised data that look back in time.

#### Fair value

Fair value is defined as the amount for which an asset may be transferred or a debt settled, between parties who are mutually independent and who have a vested interest in completing the transaction. Normally speaking, this means that listed assets are valued at the buying-rate (market value) and that the fair value of non-listed assets is estimated with the help of generally accepted valuation models.

#### **FX forward contract**

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

#### GTA A

Global Tactical Asset Allocation mandate. A mandate that applies a TAA strategy on a global basis.

#### Idiosyncratic risk

Risk in individual positions that can be diversified if the number of positions are increased.

#### Implementation effects

Return contributions that derived from implementation of the strategic portfolio and index switches.

#### Information ratio

A gauge of risk-adjusted relative return. Measured as relative return, divided by tracking error.

#### Interest swap

A contract between two counterparties, in which one interest flow is exchanged for another. Normally, the undertaking given by one party to pay a fixed rate of interest is exchanged for the other party's undertaking to pay a floating rate of interest.

#### IPFV

International Private Equity and Venture Capital Valuation Guidelines.

#### ISDA contract

International Swaps and Derivatives Association. An ISDA contract is a standard contract for the regulation of trading in derivatives between two counterparties.

#### Liquidity risk

Refers to the risk that securities cannot be converted into cash, because of reduced access to or demand from the market, which either precludes the purchase or sale of such securities, or would require their sale at a loss.

#### Market risk

The market risks most relevant to the Second AP Fund are share-price risk, interest-rate risk and currency risk.

#### MSCI index

International equity indices managed by Morgan Stanley Capital International.

#### Operational risk

Refers to the risk that an error or stoppage in operations could lead to economic loss or reduced credibility.

#### QFII licence

Investors who have been granted a licence to invest in Chinese domestic equities by the Chinese Financial Supervisory Board.

#### Quantitative management

Portfolio management that focuses on exposing incorrect market pricing with the help of a mathematical model.

#### Relative return

Portfolio return compared to return on Fund's strategic portfolio. The return is cleared of commission and operating expenses.

#### **Sharpe ratio**

A gauge of risk-adjusted return. Measured as the portfolio's absolute return less risk-free interest (SSVX 12 months), divided by the standard deviation on absolute return.

#### S&P/Standard & Poor's

Standard & Poor's composite index. A cap-weighted share index of 500 US companies. Selection is based on size, liquidity and industrial sector, among other factors.

#### Strategic portfolio

The Second AP Fund's strategic portfolio is determined annually by the Board of Directors and confirms the Fund's decision on strategic asset allocation.

## Systematic risk

Market risk segment that cannot be diversified by increasing the number of positions.

#### TAA

Tactical Asset Allocation. An active portfolio management strategy focused on overperformance in diverse asset classes.

#### Value-at-Risk, VaR

A measure of risk that indicates the maximum loss, based on a given confidence level, that a portfolio may incur over a given period. VaR is normally calculated at a confidence level of 95 per cent.

#### Volatilit

Volatility refers to the amount the price of a financial asset varies over time. This is normally expressed as a percentage, in terms of the standard deviation.



Through our strategy, culture and our employees, we will continue to provide world class management and a good return for Sweden's pensioners.

Eva Halvarsson, CEO of the Second AP Fund.

