TALENT • HEALTH • RETIREMENT • INVESTMENTS

FINANCIAL UPDATE AND PLANNING FOR THE 2013 VALUATION
AVON PENSION FUND

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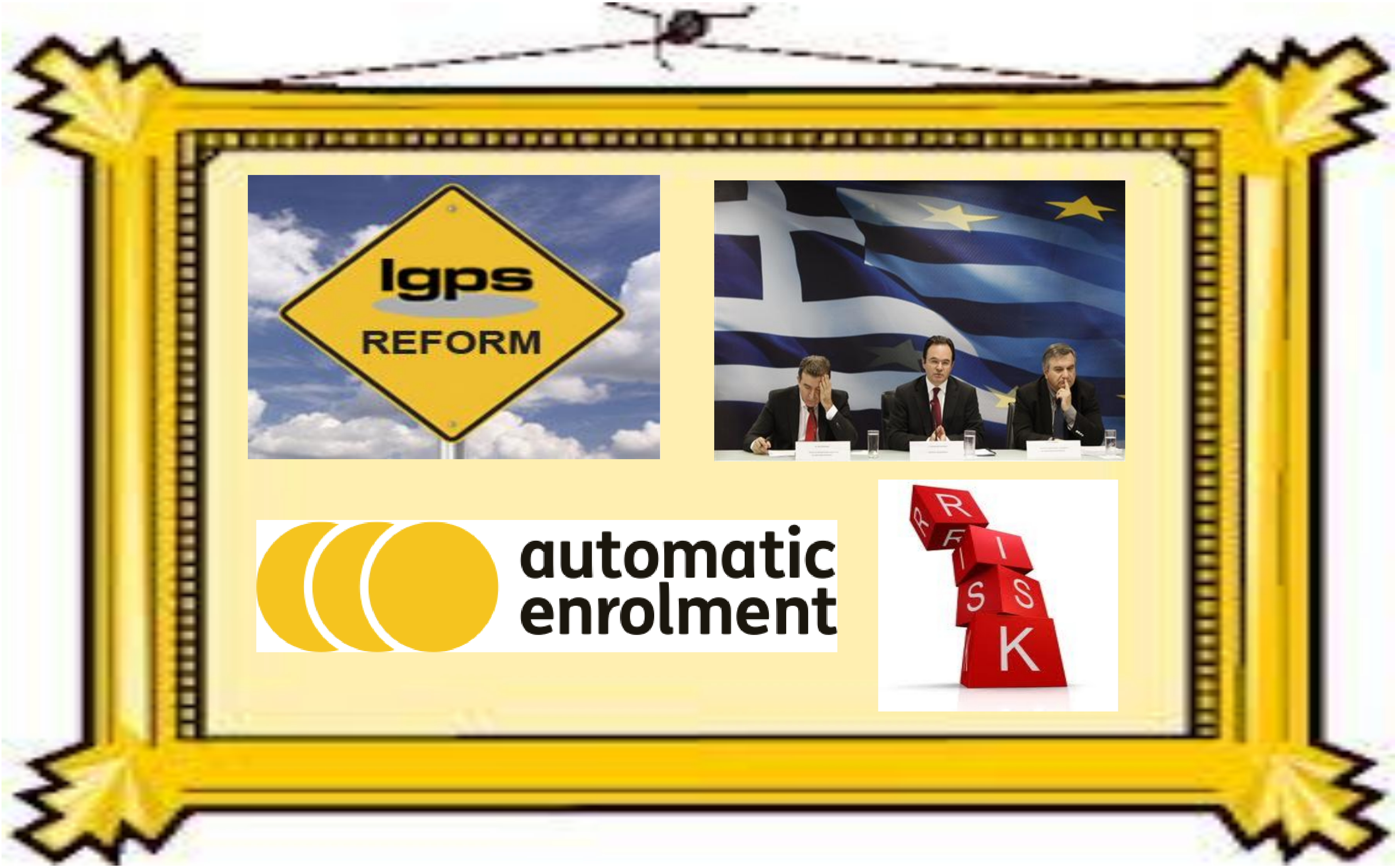
14 December 2012
Actuary to the Avon Pension Fund

2012 – The Big Picture for Pensions



Agenda

Actuarial Valuation

Financial Matters – 2012 Update and 2013 Valuation Outcome

LGPS Reforms

Stabilisation of Contribution Rates

Fund Liquidity and Auto-Enrolment

Next Steps – Looking Forward to 2013

ACTUARIAL VALUATION

Actuarial valuation
Key issues to consider looking ahead to 2013

Affordability

- Budget pressures – Austerity for how long?
- Further reductions in workforce for employers?
- Economic outlook and contribution patterns

Assumptions

- Impact of low gilt-yields
- Expected investment returns (short & long term)
- Inflation assumptions (market distortions, RPI/CPI differential)
- Review demographic assumptions / trends
- Continuing pay restraint?

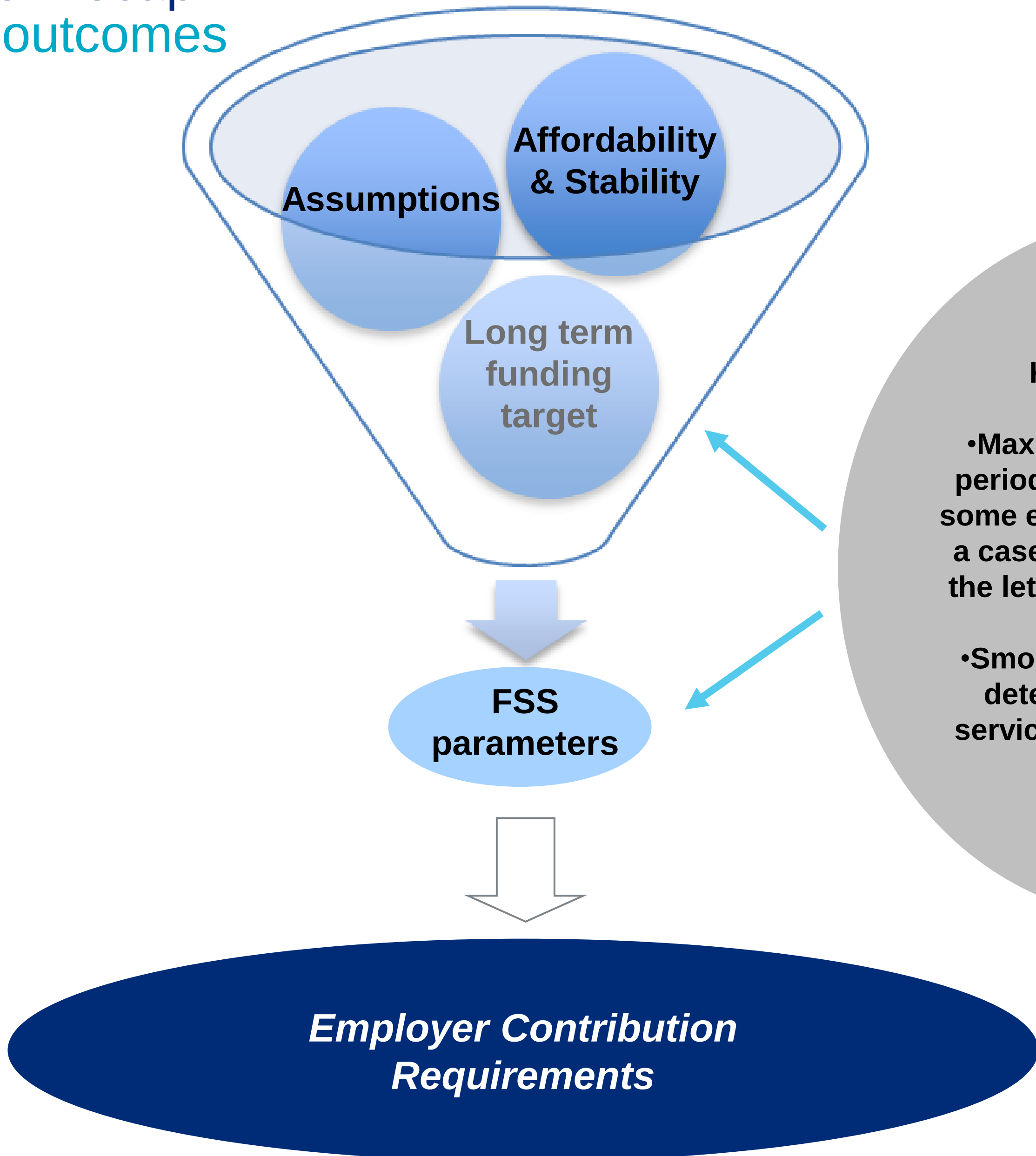
Risk Management

- Higher investment return assumption = higher reliance on investment returns
- Cost control mechanism
- Pension Fund cashflows
- Recovery Periods

Changes to the LGPS

- New scheme from 2014
- Auto-enrolment
- Public Service Pensions Bill
- Cost control mechanism

2010 valuation recap
Results and outcomes



Key Assumptions

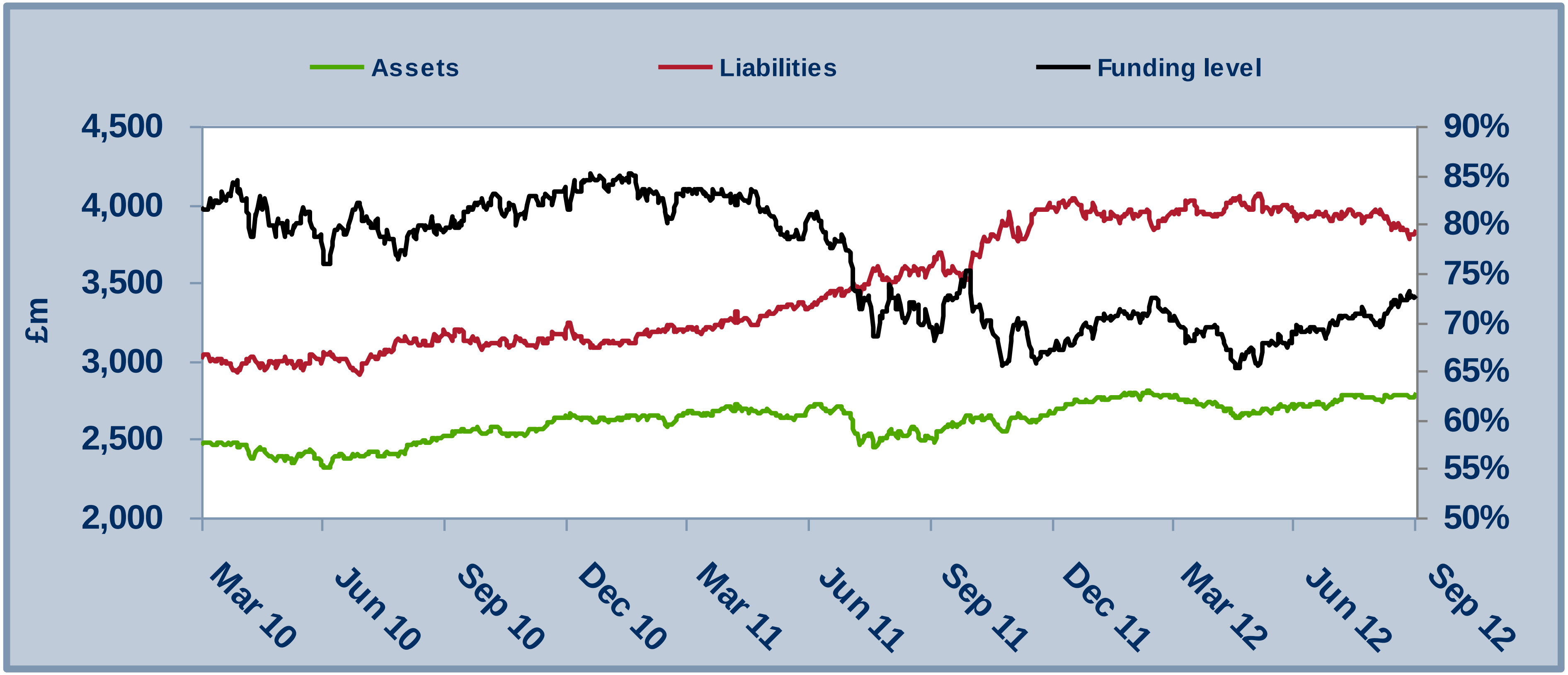
- **Maximum deficit recovery period of 30 years (lower for some employers, assessed on a case-by-case basis or with the letting scheme employer)**
- **Smoothed discount rate to determine cost of future service benefits to help with stability**

2010 valuation recap
Whole Fund Results

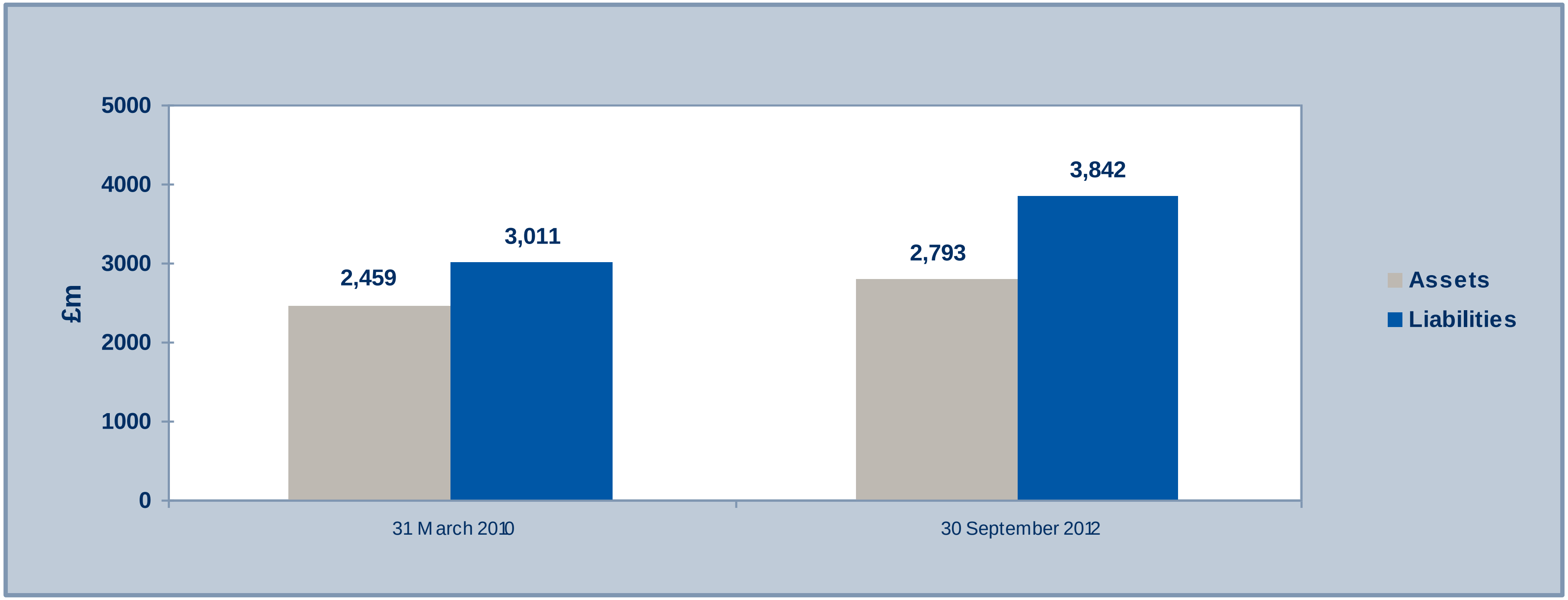
	31 March 2010
Assets	**£2,459m**
Liabilities	**£3,011m**
Deficit	**£552m**
Funding level	**82%**
Future service contribution rate	**11.8% p.a.**
Required Deficit Lump Sum (2012/13 terms) (increasing at 4.5% p.a.)	**£31m**

FINANCIAL MATTERS – 2012 UPDATE AND 2013 VALUATION OUTCOME

Funding Review results
Progress of funding position

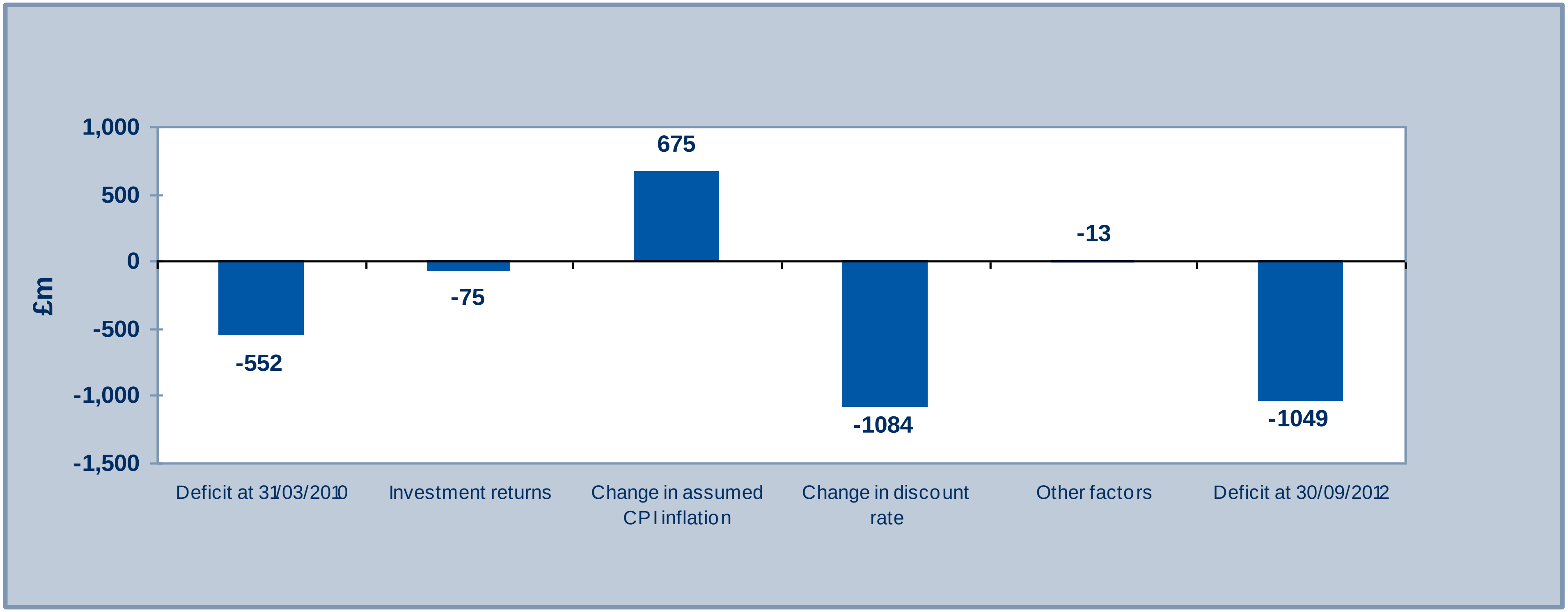


Funding Review Results
Estimated "like for like" past service position

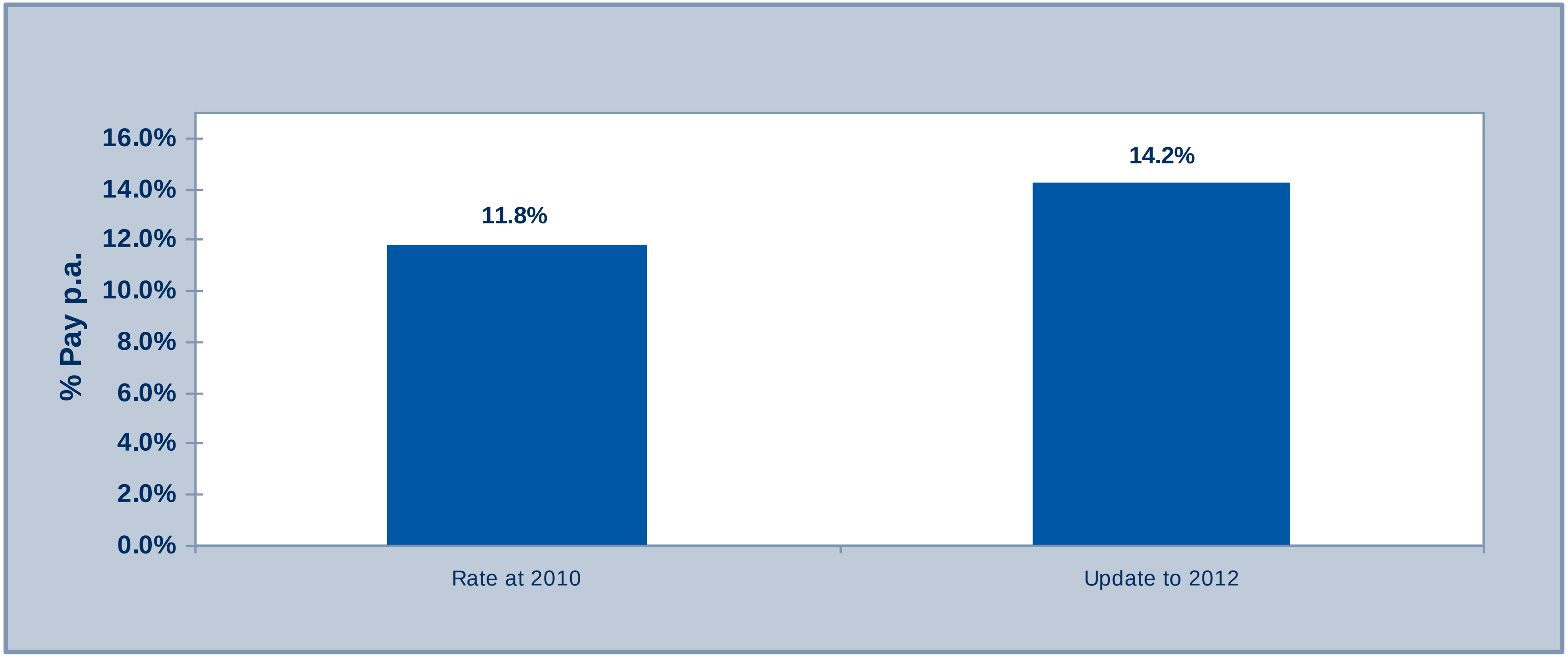


	31 March 2010	30 September 2012
Funding level	**82%**	**73%**
Shortfall(£m)	**552**	**1,049**

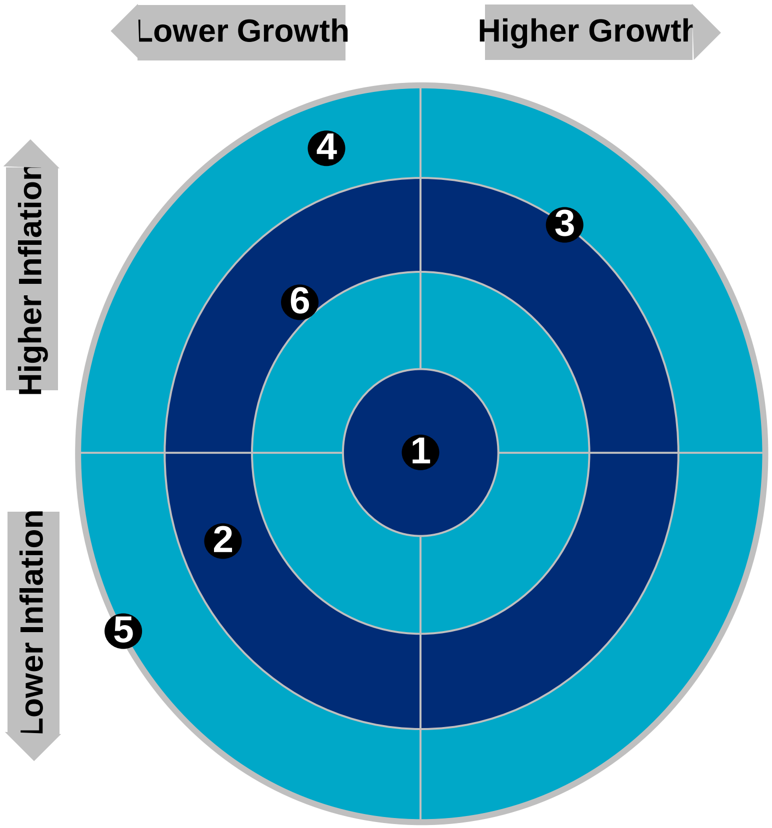
Approximate analysis of change in past service position



Funding Review Results
Illustrative average employer future service contribution rate – Current LGPS scheme



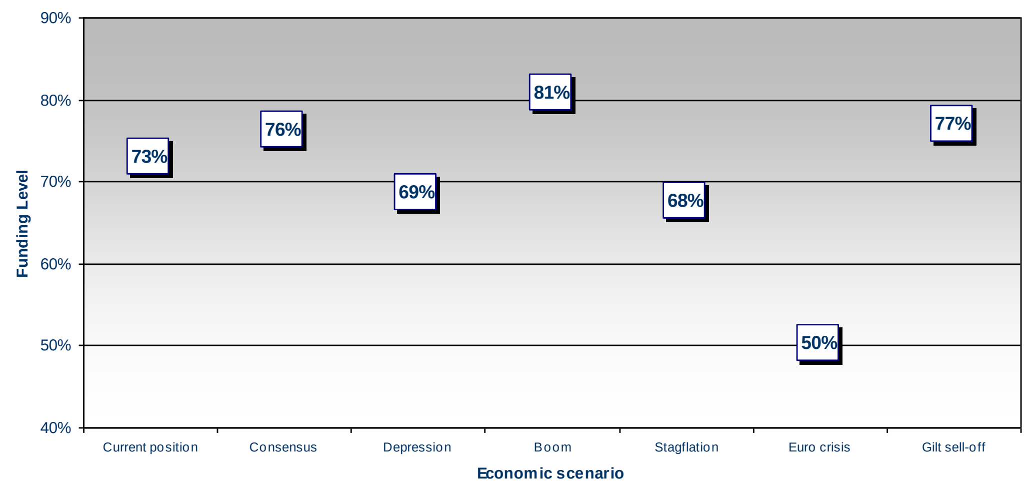
Projected Past Service Funding Position for 2013



1. Consensus - Balance between cuts and growth.
2. Depression - Austerity measures stifle growth.
3. Boom - Europe reaches agreement and single currency is protected.
4. Stagflation - Continuing loss of confidence coupled with rising commodity & oil prices.
5. Euro-crisis – Euro fails with banks taking significant losses.
6. Gilt sell-off – UK loses 'safe haven' status or is downgraded.

The chart to the right shows the expected funding levels at 30 September 2013 alongside the current position as at 30 September 2012. Under the consensus scenario the deficit as at 30 September 2013 is £956m.

Projected Funding Level at 30 September 2013



LGPS REFORMS

Public Service Pensions Bill - Summary

- Replaces current enabling legislation for public sector schemes and sets out basis for which benefits to be provided by each scheme,
- Reshapes governance arrangements and introduces wide ranging Treasury control i.e. cost control mechanism.
- Sets out protections for current scheme members.
- Features particularly relevant for LGPS include:
  - The Pensions Regulator (TPR) will play a more significant role in overseeing operation of LGPS
  - The formal appointment of “Scheme Managers” and “Pension Boards” by each LGPS Fund
  - Additional administrative requirements e.g. establishing internal controls
  - Emphasis on “long-term cost efficiency” of the Scheme, alongside “solvency”
  - Independent review of valuations/contribution rates?
- Government believes it will cut the cost to taxpayers of public sector pensions by nearly one-half allowing for the CPI indexation change also.

LGPS 2014 – Key Parameters

Basis of pension	**Career Average Revalued Earnings (CARE)**
Accrual rate	**1/49th**
Revaluation rate	**Consumer Price Index (CPI)**
Normal Pension Age	**State Pension Age (min 65) - Transitional Protection**
Member contributions	**Average expected to stay at 6.5%**
Contribution/Benefit flexibility	**50/50 Option**
Vesting Period	**Increases from 3 months to 2 years**
Definition of pensionable pay	**Pay (including Overtime + Additional Hours)**

Do you think that the new LGPS will be cheaper for all employers?

A. Yes

B. No

C. It depends….

D. Fingers crossed

LGPS 2014 – Points to Note

No impact on accrued benefits prior to 2014 – past service deficits and required recovery contributions remain an issue

Pensionable pay includes non-contractual overtime – even if % of pay "cost" is lower actual £ cost could be higher for certain employers

50/50 option could encourage take-up rates which could increase cash requirements for employers

NPA link to SPA and longevity will be crucial change to help with sustainability

Certain groups of members are highly likely to benefit from the change – for instance older members with low pay growth. This will impact on savings emerging for employers

Cost control mechanism – total cost envelope of 19.5% of pay, cap/collar approach etc before benefits or member contributions changed (further comments later)

LGPS 2014 – Employer future service contribution rate

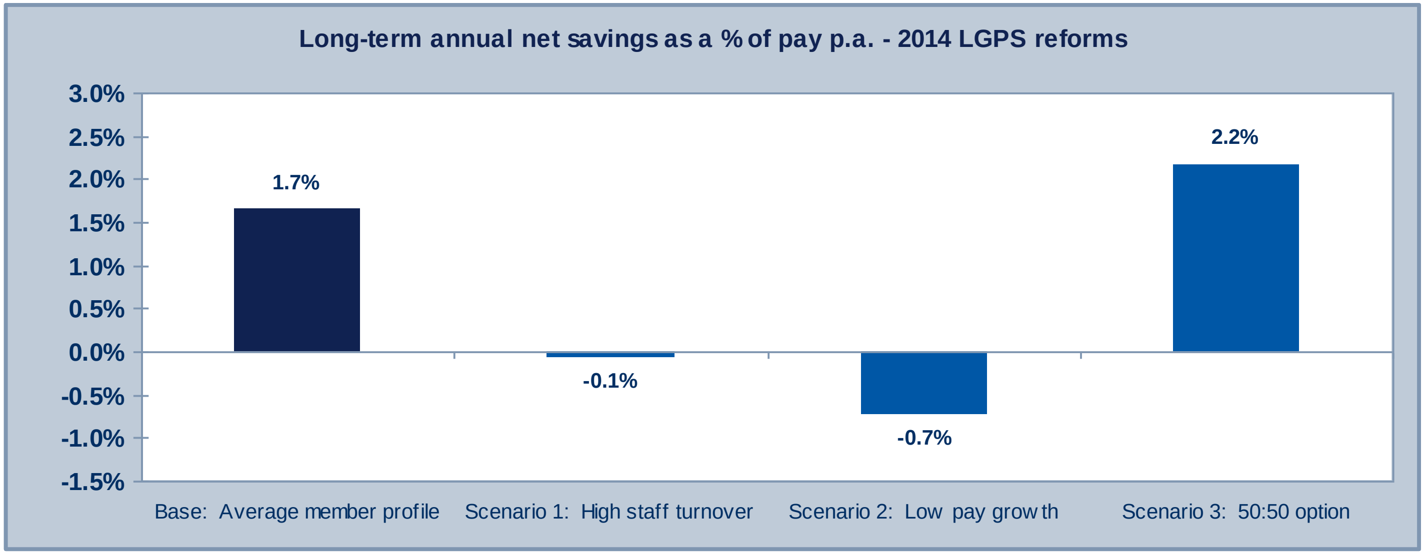
The table below shows an approximate analysis from the existing future service rate to the new rate under LGPS 2014 based on broad costs assuming the same average member rate. The figures ignore the 50:50 option which would reduce costs to employers (see next slide) :

	Average employer profile	Young profile	Old profile
Current future service rate	14.2%	10.8%	15.1%
60ths FS going to 49ths CARE	-0.2%	-2.9%	1.9%
NPA linked to SPA	-1.6%	-1.7%	-3.6%
Transitional protection	0.2%	0.0%	3.6%
Vesting increased to 2 years	-0.1%	-0.1%	-0.1%
Future service rate	12.5%	6.1%	16.9%
Post 2014 "saving"**	1.7%	4.7%	-1.8%

A negative figure is a **cost to the employer

LGPS 2014 – Relative cost analysis under different scenarios

The last slide showed how contribution rate changes can vary depending on employer age profile. However other member behaviours/characteristics can also impact on cost savings emerging from the reforms (even if the short-term valuation contribution rate would be unaffected):



- **High staff turnover** – a **cost** of 0.1% of pay from the move from final salary to CARE as members leave earlier. (E.g.: Members work 7 years on average in the LGPS)
- **Low pay growth** – actual pay increases are lower than assumed, so employer does not get the full benefit of the move to CARE linked to CPI. (E.g.: pay increases 1% p.a. less than valuation assumptions). This would result in a **cost** of 0.7% of pay.
- **50:50 option** – If 10% of members opted to take the 50:50 option, savings would increase further, by an additional 0.5% pa, i.e. a total **saving** of 2.2% pa instead of 1.7% pa.

LGPS 2014 – Good or Bad Outcome?

Higher accrual rate provides a significant benefit “guarantee” to members i.e. “locks in” benefit amount and is not linked to economic outlook.

Certain members have the potential benefit significantly in the short term vs current scheme

No certainty therefore that new scheme will deliver full anticipated savings to employers, especially in the current economic environment.

Cost control mechanism will be crucial to the sustainability of the scheme.

Bringing it all together…..
Like for Like with 2010 FSS

	2010	2012
	2010 Valuation (pre 2014 reforms)	**Updated for Market Conditions (post 2014 reforms)**
Illustrative Deficit (£m)	552	1,049
Annual deficit payment required over period (indexed in line with pay growth) (£m)		
Recovery period 21 years	31	56
Average Future Service Contributions (% Pensionable Earnings)	11.8%	12.5%

STABILISATION OF CONTRIBUTION RATES

Can stability of contribution rates be achieved?

Tools to solve the puzzle

Can stability of contribution rates be achieved?
Key Questions

What is the key period for any stability in terms of the austerity programme?

Can we relieve the pressure on contribution requirements due to market conditions and other factors?

Is the discount rate underlying the valuation expected to remain at the current levels?

What is the investment return expectation over the short, medium and long term on the Fund’s assets?

Do we treat all employers the same in terms of the key funding parameters?

Will the reforms and in particular the cost control mechanism impact on the assumptions?

Will the reforms also impact on membership behaviour e.g. retirement patterns and how will this impact on assumptions?

LGPS 2014 Cost Control Mechanism – possible framework

- Total cost envelope will be 19.5% of pay as assessed by GAD for LGPS as a whole (this includes allowance for 50:50 option take-up)
- FSR to remain at initial rate within cap/collar
- Possible intermediate trigger for scheme changes at lower cap/collar
- Covers “member costs” (e.g. life expectancy via longevity index, ill-health retirements, 50/50 take-up?)

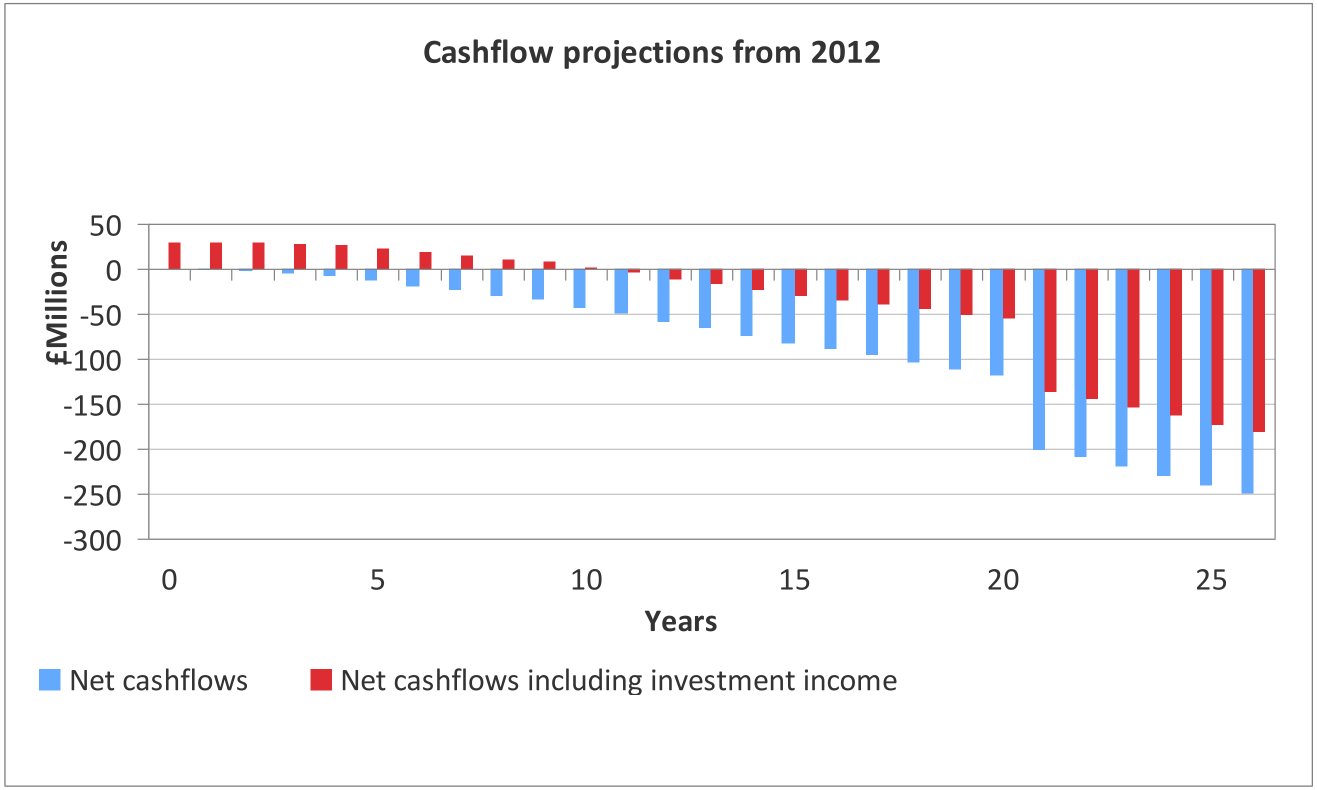
- Mechanisms
  - ➢adjust member benefits
  - ➢adjust member contributions
- Some elements not expected to be in scope
  - ➢Changes in financial assumptions (e.g. discount rate, inflation)
  - ➢Investment returns
  - ➢**Existing deficits**

More details to come but will potentially have an impact on valuation assumptions – in particular life expectancy improvement rates for future service liabilities

FUND LIQUIDITY

Projected Cashflows
Net Cashflow Position

- Our projections show the Fund remaining cashflow positive for one more year.
- Allowing for investment income at 1.0% p.a., the Fund is cashflow positive for around 10 years (2023/24).
- The potential impact on investment strategy and treasury management should be considered, noting that according to the SIP the Fund does not hold any assets in cash.
- Auto-Enrolment will have an effect on the cashflow profile.



The charts are based on the membership data provided by the Fund as at 31 March 2012, and allow for the LGPS reforms expected in 2014. They assume that the current total £ contribution pattern continues.

The key assumptions used to project the cashflows are based on the 2010 valuation ("like for like", adjusted for market conditions as at 31 March 2012 for consistency with membership),

Auto-enrolment

Summary of key employer duties

- Legislation introduces an employer duty to auto-enrol all eligible jobholders (age 22 to SPA, earnings over £8,105) into a qualifying pension scheme.
- Employers will pay a minimum level of contribution on their behalf on qualifying earnings between £5,564 and £42,475 (NI threshold 2012/13 terms).
- Jobholders can opt out, but must be re-enrolled every 3 years. Non-eligible employees can choose to opt in and employer enrols.

Example Staging Dates (based on number of employees)

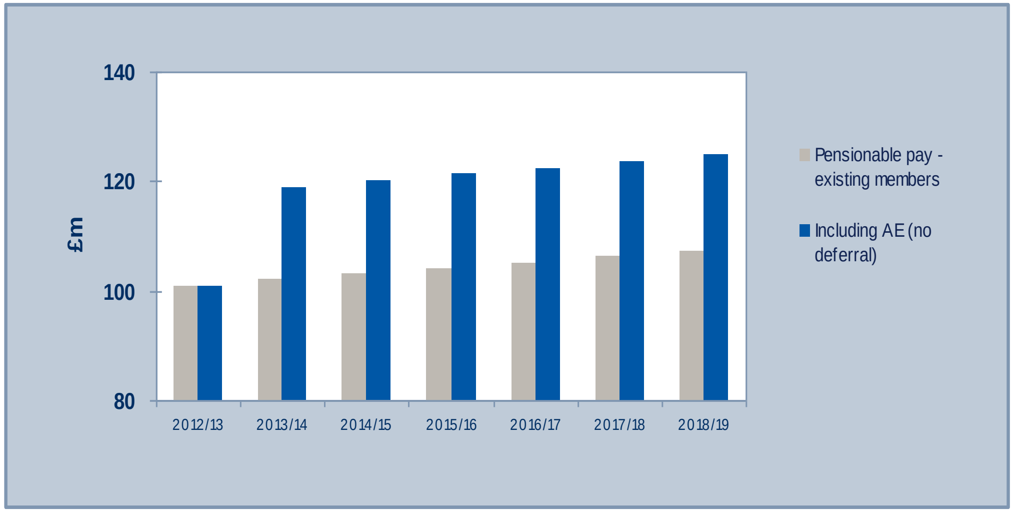
10,000 – 19,999	By 1 March 2013
3,000 – 3,999	By 1 July 2013
50 – 249	By 1 April 2014 to 1 April 2015

Employers using LGPS as auto-enrolment scheme (e.g. scheduled bodies) can delay beyond their staging date until up to 2017 to auto-enrol existing opt-outs, but no delay for new employees.

 16/11/2012

Auto Enrolment Projections
Example Employer - £100m Current Pensionable Payroll (staging date of 1 April 2013)

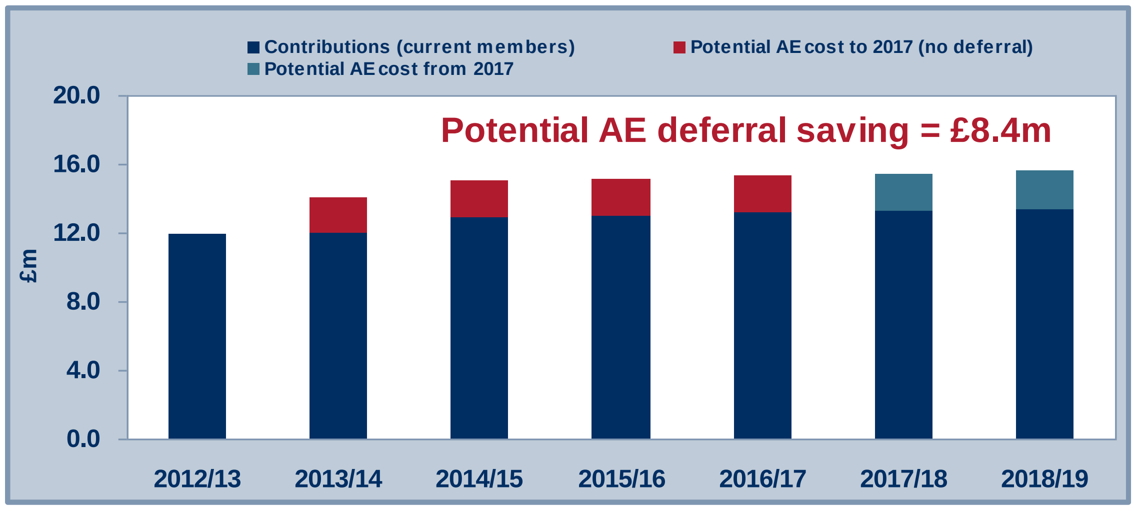
Potential impact of AE on pensionable pay



This chart shows projected pay for current members, and the potential increase in pay due to AE. (We have assumed increase in payroll of 1% pa. where projections were not available)

The chart below shows the additional contributions that would be payable by the Employer due to AE.

Potential impact on contributions



Currently the Employer's take up rate based on payroll is **75%.** In these projections we've assumed that **50%** of the remaining members will join the Fund due to AE.

This equates to additional pensionable pay of around **£17.5m pa**, equating to additional pension contributions of around **£2.2m pa.**

This means that by choosing to defer the implementation of AE to 2017 the Council can reduce pension fund contributions by a total of **£8.4m** if the assumptions are borne out.

Auto-Enrolment

Impact on Contributions of different employer sizes and take-up

	Payroll (£)	Staging Date	Reduction - 60% current take-up (£000s)	Reduction - 75% current take-up (£000s)	Reduction - 90% current take-up (£000s)
Employer A	200,000,000	March 2013	34,400	17,200	5,700
Employer B	100,000,000	April 2013	16,900	**8,400**	2,800
Employer C	50,000,000	July 2013	8,300	4,000	1,300
Employer D	10,000,000	November 2013	1,500	700	200
Employer E	1,000,000	April 2015	130	60	20
Employer F	500,000	January 2016	60	30	10

NEXT STEPS – LOOKING FORWARD TO 2013

Valuation timeline

Consideration of data requirements by employers	January/February 2013
Valuation effective date	31 March 2013
Preliminary discussions between Actuary and Fund regarding assumptions and indicative approximate results	April / May 2013
Provision of data by Employers to Fund	April 2013
Provision of data by Fund to Actuary	July 2013
Actuary Processes valuation	July – August 2013
Actuary discusses Councils results & funding strategy with Fund	September 2013
Finalisation of individual employer results by Actuary	October 2013
Liaison with employers and agreement of contributions	October / November 2013
Provision of formal report & certificates to Fund documenting the results of the valuation	March 2014

Actuarial valuations
Data Quality

- Reliability of valuation results for each individual employer ultimately dependent on the quality of the underlying membership data.
- Employer will provide data in the format required by the Fund. Early discussions are needed regarding to ensure the quality of this data.
- Engagement with payroll and HR departments within each employer essential in terms of ensuring the data provided to the Fund is clean and complete as far as possible.
- Volume of membership movements since 2010 valuation increases significance of data quality – potentially a big issue.
- Validation process carried out by Actuary based on both whole Fund and individual employer checks.
- Where data is missing / out of tolerance we may either estimate or query with the Fund – tend to err on the side of caution
- Materiality is important for each employer – results must have credibility.

Next steps

Employers to consider what is an acceptable contributions profile in terms of budgetary constraints with a view to discussing with the Fund

Individual factors could still affect contribution requirements (outsourcing, bulk transfers, profile changes etc)

Employers need to supply good quality data provided in line with the valuation timetable.

The Fund will consider which assumptions are still acceptable and what (if any) potential stabilisation mechanisms can be applied to achieve reasonably predictable contributions.

One such consideration by the Fund will be further analysis of the impact of *reversion* of bond yields on assets, liabilities and deficit recovery plan.

Other additional analyses will also be carried out by the Fund as required, (life expectancy analysis, investment strategy review etc) and assess the impact of changes in the longer term.

APPENDIX:
ASSUMPTIONS AND SUPPORTING INFORMATION

Past Service Funding Target Financial assumptions – Like for Like with 2010

Market data	31 March 2010	30 September 2012
Corporate bond yield	5.60% p.a.	4.40% p.a.
Fixed interest gilt yield	4.50% p.a.	3.10% p.a.
Index-linked gilt yield	0.70% p.a.	0.20% p.a.
Market-implied price inflation (derived by differencing yields on fixed-interest and index-linked gilts)	3.80% p.a.	2.90% p.a.
Adjustment for Inflation Risk Premium (IRP) and RPI/CPI differential	-0.80% p.a.	-0.80% p.a.
Assumptions used for Past Service Liabilities		
Discount rate: pre-retirement	6.85% p.a.	5.45% p.a.
post-retirement	5.70% p.a.	4.30% p.a.
individual employers	6.10% p.a.	4.70% p.a.
Inflation: Consumer Prices Index (CPI)	3.00% p.a.	2.10% p.a.
Salary inflation	4.50% p.a.	3.60% p.a.
Pension increases	3.00% p.a.	2.10% p.a.

Future Service Financial assumptions – Like for Like with 2010

Market data		31 March 2010	30 September 2012
Corporate bond yield		5.6% p.a.	4.4% p.a.
Fixed interest gilt yield		4.5% p.a.	3.1% p.a.
Assumptions used for Future Service Liabilities			
Discount rate:	pre-retirement	6.75% p.a.	5.85% p.a.
	post-retirement	6.75% p.a.	5.85% p.a.
	individual employers	6.75% p.a.	5.85% p.a.
Inflation: Consumer Prices Index (CPI)		3.00% p.a.	2.10% p.a.
Salary inflation		4.50% p.a.	3.60% p.a.
Pension increases		3.00% p.a.	2.10% p.a.

Assumptions

Economic scenarios – Projections from 30 September 2012

1 year projection

	Consensus	Depression	Boom	Stagflation	Euro crisis	Gilt sell-off
Annualised index returns (% p.a.)						
Equities	7.5%	-5.0%	10.0%	-2.5%	-30.0%	5.0%
Over 15 Year Fixed Interest Gilts	0.9%	5.0%	-6.9%	-6.9%	18.5%	-14.0%
Index-Linked Gilts (All Stocks)	2.1%	-1.4%	-4.1%	-5.0%	11.6%	-3.4%
AA bonds (All Stocks)	4.8%	1.3%	1.3%	-2.1%	1.3%	1.3%
Cash	0.5%	0.5%	1.0%	1.0%	0.3%	1.5%
Annualised growth rates (% p.a.)						
Inflation	3.0%	3.0%	4.5%	5.0%	2.0%	5.3%
Financial asset yields at end of 1 year (% p.a.)						
Bank Base Rate	0.5%	0.5%	1.0%	1.0%	0.3%	1.5%
Fixed Interest Gilt Yield	3.0%	2.8%	3.5%	3.5%	2.0%	4.0%
Index-Linked (Real) Yield	0.1%	0.3%	0.5%	0.0%	-0.5%	0.5%
Corporate Bond Yield	5.0%	5.5%	5.5%	6.0%	5.5%	5.5%

*We have estimated long term market implied CPI inflation based on the estimated gilt yields above, but allowing for the Bank of England long term target for CPI inflation of 2% pa.

Auto Enrolment Projections
Background and Assumptions

- Calculated projected costs over short and medium term for example employers using their actual staging date based on implied headcount (assuming all employees on £20k p.a.).
- Considered payroll of current employees not in scheme (i.e. existing opt-outs). Not considered change in new entrants profile.
- Used individual employer future service rate for benefits to April 2014 then estimated rate for new scheme.
- Assumed take up rate of **50%.** Central research by the NAPF suggests take up rate of 60% -70%, i.e. opt-out rate of 30% - 40%. Higher LGPS employee contributions suggest higher opt out rate.
- Auto enrolment (AE) already exists in a couple of countries. In Australia AE is compulsory for employees, in Norway AE is non-contributory for employees. Opting out is not applicable.
- However, New Zealand has an AE Scheme, with the ability to opt out, in place. This shows an opt out rate of around 30% although average contribution rates are lower than LGPS. See separate paper for more detail.
- Assumes all employees will opt for full benefits. Employees opting for 50/50 option will reduce £ costs and this can be modelled by adjusting future service rates.

Actuarial advice

This presentation contains actuarial advice to the Administering Authority concerning potential decisions on the financial management of the Fund.

- This presentation forms part of a suite of material that will be used by the Administering Authority in making any decisions.
- It forms part of the audit trail for the 2013 valuation and should be read in conjunction with any other material provided.
- The calculations referred to in the report use methods and assumptions appropriate for reviewing the financial position of the Fund and determining potential contribution rates for the future. Mercer does not accept liability to any third party in respect of this report; nor does Mercer accept liability to the Administering Authority if the information provided in the report is used for any purpose other than that stated (for example for accounting).