Barnett Waddingham

CIPFA Pensions Network Workshops

Liability Risk
How can we manage this

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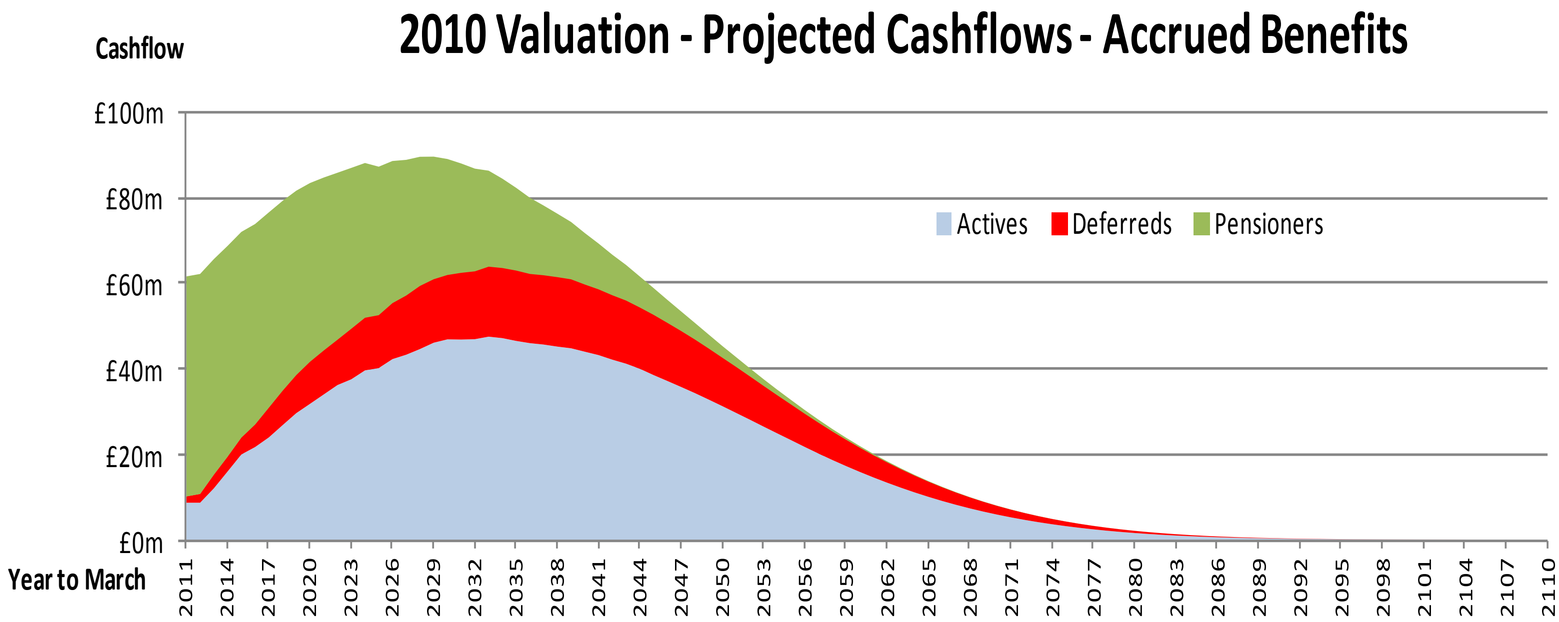
Agenda

- What are the liabilities
- Analysing the risks
- Some tools to help this
- What about the unknowns
- Questions and discussion

What are the liabilities

Feature	LGPS 2008	LGPS 2014
Basis of pension	Final Salary	Career Average Revalued Earnings (CARE)
Accrual rate	1/60th	1/49th
Revaluation rate	Benefits based on final salary	Consumer Price Index (CPI)
Normal Pension Age	Age 65	State Pension Age (min 65)
Earliest voluntary retirement age	Age 60	Age 55
Member contribution rate	Average 6.5%	No change on average
Contribution flexibility	None	50/50 Option
Definition of pensionable pay	Pay **excluding** non-contractual overtime and non-pensionable additional hours	Pay **including** non-contractual overtime and additional hours for part-time staff
Lump Sum Option	Commutation 12:1	No Change
Death in service lump sum	3 x pensionable pay	No Change
Death in service survivor benefits	1/160th (based on Tier 1 ill health enhancement)	No Change
Ill health retirement	Tier 1: immediate payment with service enhanced to Normal Pension Age (age 65) Tier 2: immediate payment of pension with 25% service enhancement to Normal Pension age (age 65) Tier 3: temporary payment of pension for up to 3 years	Same with State Pension Age replacing age 65

Look something like this



Key liability risks

Financial	• Discount Rates • Inflation • Salary
Demographic	• Mortality • Opt outs
Employer	• Covenant • Accounting values on the balance sheet
Model Risk	• Actuary set assumptions and model • How suitable are these over time • Accounting disclosures
Other influences	• Political • Maturing schemes

Risks

Anything that increases the value of the liabilities – over that expected

- Data quality
- Inflation
- Salary increases
- Discount rates
- Early retirement trends
- Other employer actions

Setting financial assumptions

Discount Rates

- Depends on purpose and objectives of valuation
- Reflect the assets held by the fund
- Accounting values

Risk

- This falls
- Placing a higher value on the liabilities
- Higher cost of pension provision

Control Mechanism

- Monitor market changes
- Set a prudent rate for valuation
- Asset matching

Setting financial assumptions

Price Inflation

Pension Increases

- Look to the gilts market
- Adjust for actual versus expected
- Adjust RPI to get to CPI
- Less 0.5% to 1.0%?

Risk

- Inflation is higher than assumed
- Benefits grow more quickly

Control Mechanism

- Monitor the market regularly
- Adopt a prudent assumption
- Invest in inflation linked assets

Setting financial assumptions

Salary Increases	• Usually 1-2% pa more than price inflation • Employers have some control in the short term
Risk	• Higher than assumed
Control Mechanism	• Employer has some control • New CARE scheme removes the final salary link (post the change date)

Demographic assumptions

Statistical assumptions

- Investigate past experience....
- ....consider if relevant for the future
- Allow for improvement trends

Early retirement trends

- Fund in advance – ill health
- At event – redundancy
- Catch up every 3 years

Opt outs

- Fund maturing more quickly?

What tools do we have to help

The triennial valuation	• Every 3 years • Possibly annually
Mortality studies	• Experience analysis • Specialist team within BW
Cashflow projections	• When will the investment strategy have to change • Assess when the fund may run out of money
Employer covenants	• Specialist firms • Traffic light risk reports
Ill heath monitoring	• Annually
Data cleansing	• At the valuation • Part of a mortality review

The valuation

2013 Valuation covered later

- Data

Ensure assumptions are suitable

- Depends on the purpose

Ensure the model is suitable

- And can withstand the test of time
- **Gilts plus fixed premium is being considered by the profession**
- FRS17 basis

Consider the deficit recover period

- Vary with employer risk
- Not too extreme

Engage regularly with the actuary and employers

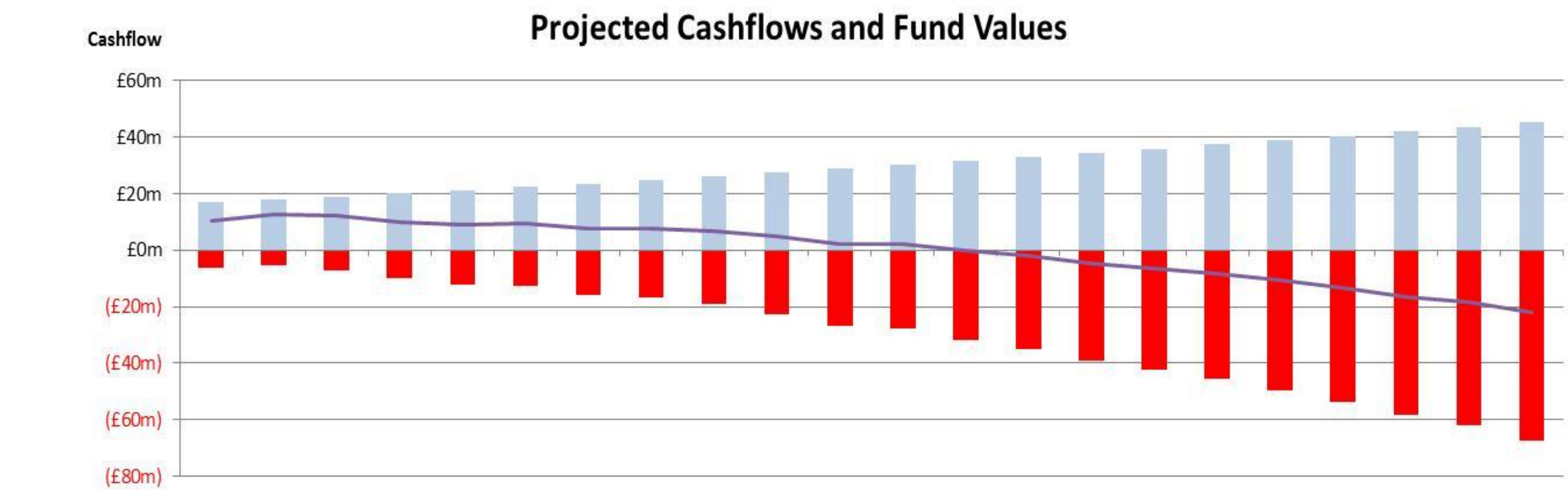
Longevity analysis

Socio Economic Analysis	• Taking more relevant data into the model than 2010 valuations
Review past experience	• Ties this in with actual Fund experience
Benchmarking service	• To compare with similar funds

Cashflow projections

Not just a snapshot

- Project into the future
- Assumes population remains stable



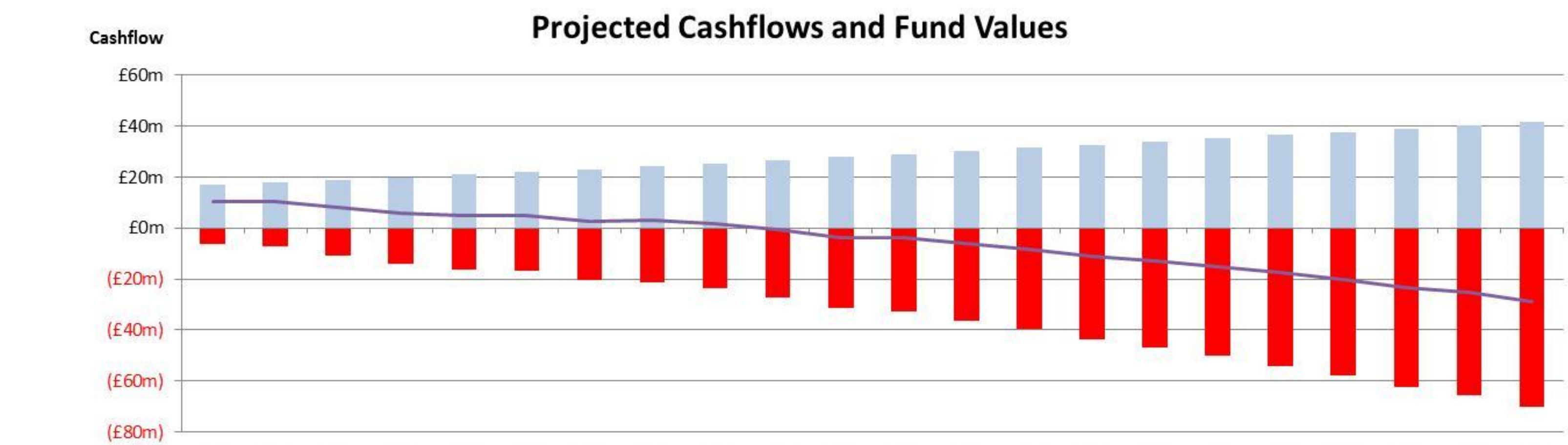
Year to March	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Net New Money	(£6m)	(£5m)	(£7m)	(£10m)	(£12m)	(£13m)	(£16m)	(£17m)	(£19m)	(£23m)	(£27m)
Investment Income	£17m	£18m	£19m	£20m	£21m	£22m	£24m	£25m	£26m	£27m	£29m
Cashflow	£10m	£12m	£12m	£10m	£9m	£10m	£8m	£8m	£7m	£5m	£2m

Year to March	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Net New Money	(£28m)	(£32m)	(£35m)	(£39m)	(£42m)	(£46m)	(£50m)	(£54m)	(£58m)	(£62m)	(£67m)
Investment Income	£30m	£32m	£33m	£34m	£36m	£37m	£39m	£40m	£42m	£44m	£45m
Cashflow	£2m	(£0m)	(£2m)	(£5m)	(£6m)	(£8m)	(£11m)	(£13m)	(£16m)	(£19m)	(£22m)

Cashflow projections

Not just a snapshot

- Project into the future
- Assumes population reduces by 20%



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Net New Money	(£6m)	(£7m)	(£11m)	(£14m)	(£16m)	(£17m)	(£20m)	(£21m)	(£24m)	(£27m)	(£31m)	(£33m)	(£36m)	(£40m)	(£44m)	(£47m)	(£50m)	(£54m)	(£58m)	(£62m)	(£66m)	(£70m)
Investment Income	£17m	£18m	£19m	£20m	£21m	£22m	£23m	£24m	£25m	£27m	£28m	£29m	£30m	£31m	£33m	£34m	£35m	£36m	£38m	£39m	£40m	£42m
Cashflow	£10m	£11m	£8m	£6m	£5m	£5m	£3m	£3m	£2m	(£1m)	(£4m)	(£4m)	(£6m)	(£8m)	(£11m)	(£13m)	(£15m)	(£18m)	(£20m)	(£23m)	(£25m)	(£29m)

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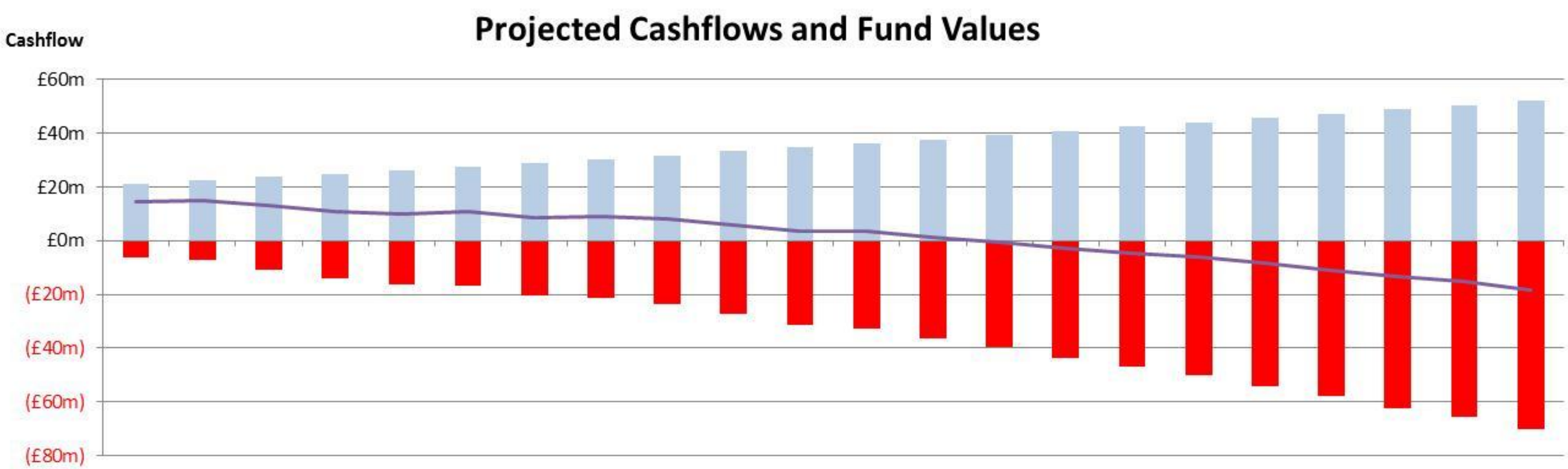
Cashflow projections

Not just a snapshot

- Project into the future
- Assumes population reduces by 20%
- Income yield increases



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Net New Money	(£6m)	(£7m)	(£11m)	(£14m)	(£16m)	(£17m)	(£20m)	(£21m)	(£24m)	(£27m)	(£31m)	(£33m)	(£36m)	(£40m)	(£44m)	(£47m)	(£50m)	(£54m)	(£58m)	(£62m)	(£66m)	(£70m)
Investment Income	£21m	£22m	£24m	£25m	£26m	£28m	£29m	£30m	£32m	£33m	£35m	£36m	£38m	£39m	£41m	£42m	£44m	£46m	£47m	£49m	£50m	£52m
Cashflow	£15m	£15m	£13m	£11m	£10m	£11m	£9m	£9m	£8m	£6m	£3m	£4m	£1m	(£0m)	(£3m)	(£5m)	(£6m)	(£8m)	(£11m)	(£13m)	(£15m)	(£18m)

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The assets

Suitable investment strategy

- Diversified
- Regular monitoring
- Some risk is needed to keep the cost down
- The “price” of this strategy is volatility

The employers

Assess the riskiness

Not just that payments are being made

Look at the company data

Size of deficit

Any guarantors existing

The employers

Assess the riskiness

Employer Type	Number of active members	Ongoing Deficit	Deficit at Risk (Deficit less Bond)	Guarantor Risk Score	D&B Risk Score	Other Info Adjustment	Total Risk Score ("TRS")
CAB	171	£5.12m	£5.12m	100	0	0	50%
CAB	117	£2.27m	£2.27m	100	0	0	50%
CAB	54	£1.78m	£1.78m	100	0	0	50%
CAB	35	£1.49m	£1.49m	100	27	0	64%
CAB	28	£1.33m	£1.33m	100	1	0	50%
CAB	6	£0.80m	£0.80m	100	35	0	67%
CAB	39	£0.71m	£0.71m	100	0	0	50%
CAB	13	£0.52m	£0.52m	100	100	0	100%
CAB	9	£0.50m	£0.50m	100	0	0	50%
CAB	7	£0.44m	£0.44m	100	2	0	51%
CAB	13	£0.43m	£0.43m	100	4	0	52%
CAB	7	£0.41m	£0.41m	100	1	0	51%
CAB	47	£0.41m	£0.41m	100	74	0	87%
CAB	4	£0.36m	£0.36m	100	0	0	50%
CAB	10	£0.36m	£0.36m	0	0	75	38%
CAB	1	£0.32m	£0.32m	100	0	0	50%
CAB	9	£0.32m	£0.32m	100	0	0	50%
CAB	8	£0.21m	£0.21m	100	0	0	50%
CAB	5	£0.19m	£0.19m	100	1	0	50%
TAB	10	£0.18m	£0.09m	0	100	0	50%
TAB	6	£0.15m	£0.06m	0	100	0	50%
CAB	1	£0.14m	£0.14m	100	0	0	50%
CAB	7	£0.13m	£0.13m	100	33	0	67%
CAB	5	£0.13m	£0.13m	100	4	0	52%
CAB	2	£0.12m	£0.12m	100	0	0	50%
TAB	6	£0.10m	£0.01m	0	100	0	50%
CAB	3	£0.08m	£0.02m	100	2	0	51%
CAB	1	£0.08m	£0.08m	100	41	0	70%

Summary

- Data suitability
- Engage in the valuation process
- Ensure the assumptions suit the purpose
- Monitor the market indices
- Regular check on investment strategy
- Regular checks on employers

What about the future

Public Sector Pension Funds remain in the spotlight

- Keep abreast of the changes
- Build these into projection models
- Make sure the model is flexible

Annual monitoring of many aspects of the fund

Not just the liabilities

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Questions?

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