



Global Convertibles in a Portfolio Context

Aviva Investors

David Clott
February 2010



Agenda:

Part I - Benefits of convertible bonds

Part II - Invest in outright or hedged convertible bonds?

This document is for investment professionals only. The content is not approved for use with retail investors or pension scheme members.

Why convertibles?



Source of returns?

“What will convertibles return next year?”

Risk return profile

“How can we assess the potential risk/return of convertible bonds for ourselves?”

Why convertibles?

“If convertible bonds are linked to equities and bonds, why not just buy those?!”

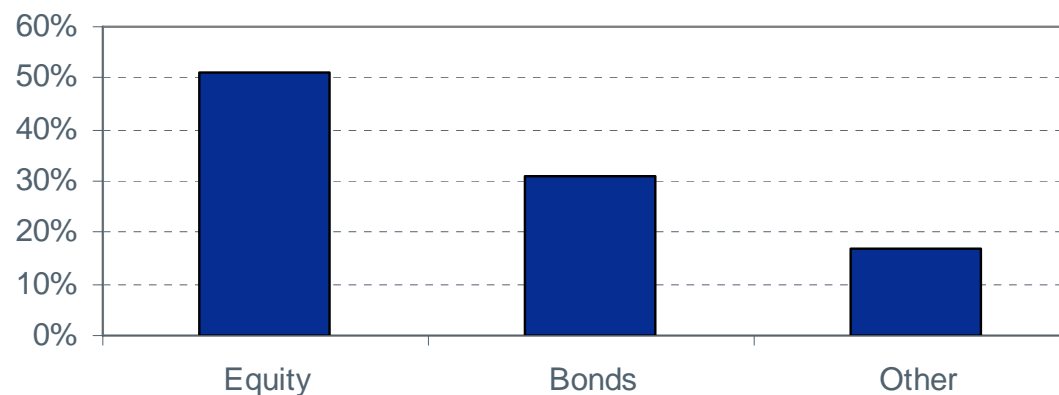
Typical questions from interested buyers

Back-testing key elements of convertible bonds return

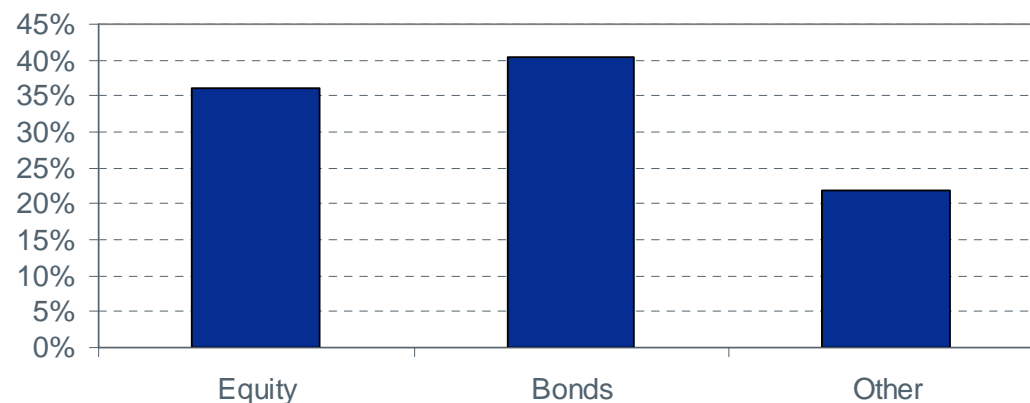


Performance attribution from Jan 1985 to Dec 2007
(Based on monthly returns)

Equities and credit matter but that's not all !



Performance attribution from Jan 1985 to Oct 2009
(Based on monthly returns)



...and this was even more true in the past 2 years

Convertible bond “attributes”: provide diversification



Population of issuers

The convertible bond market provides access to a unique population of issuers

NOT equities but equity options

Optionality in the product provides asymmetry and a different risk set

Many other factors

Independent supply and demand, cheapness/richness, are among other major differences

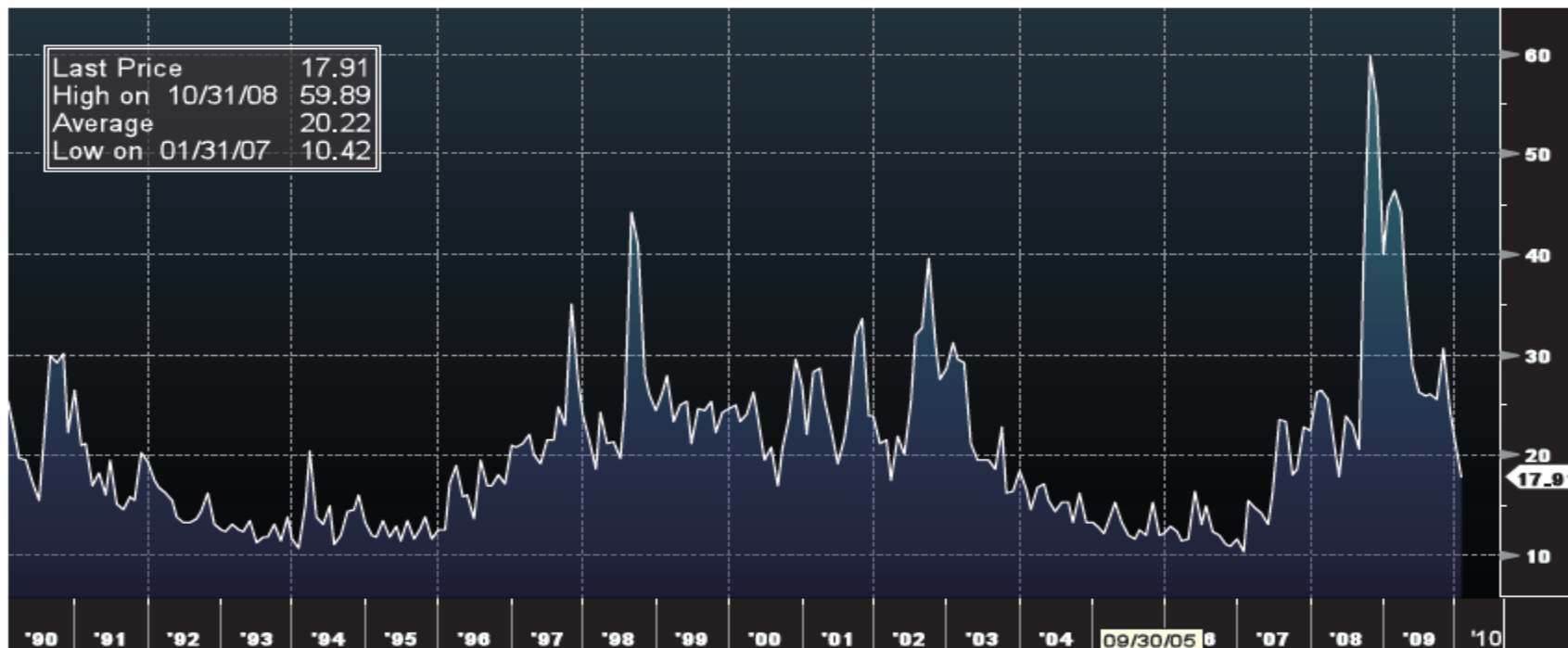
Convertible bond attributes provide a very different risk/return outcome than an equity/credit mix

Attribute: convertible bonds are an investment in volatility



VIX is interesting to monitor but is not directly relevant to global convertibles investing

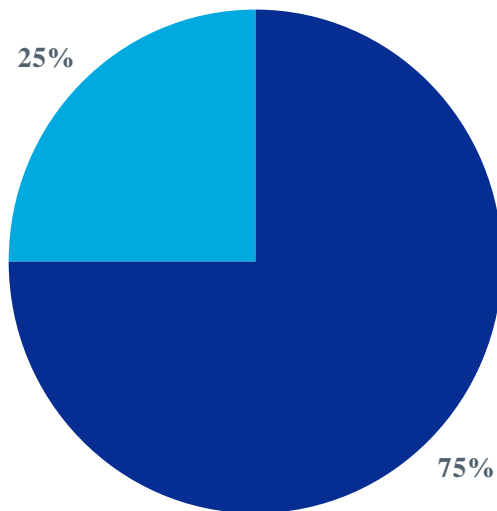
Bloomberg
VIX Index (Chicago Board Options Exchange SPX Volatility Index)
Monthly 1/31/1990 - 1/15/2010



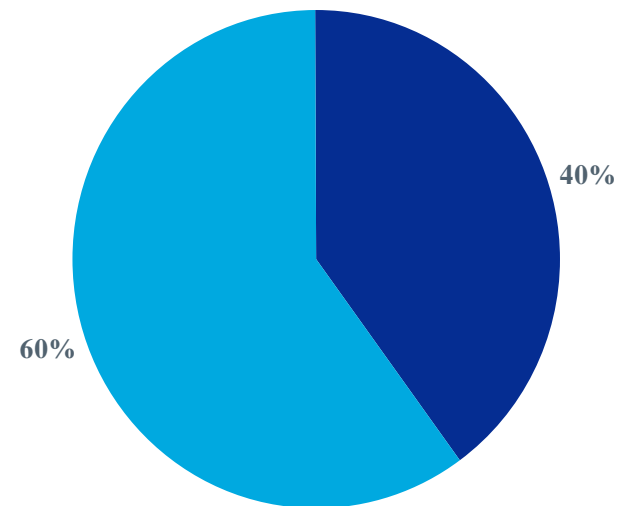
Attribute: demand for convertible bonds and how it changes



Beginning of 2008



Mid 2009



■ Hedge Funds / Prop Desks ■ Outright

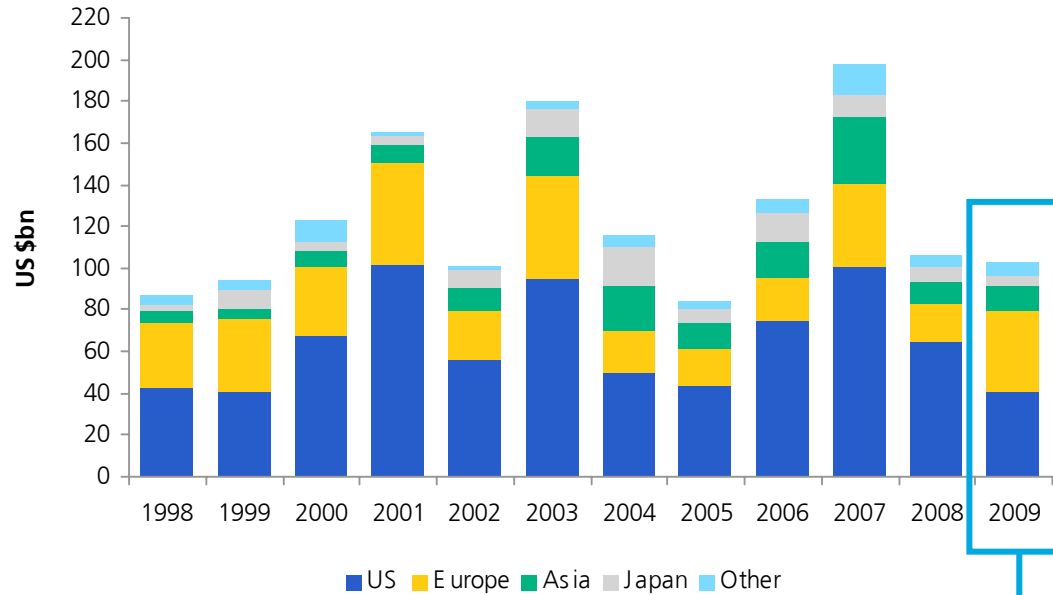
■ Hedge Funds / Prop Desks ■ Outright

Ownership in the convertibles space has been dominated by hedge funds but this changes over time

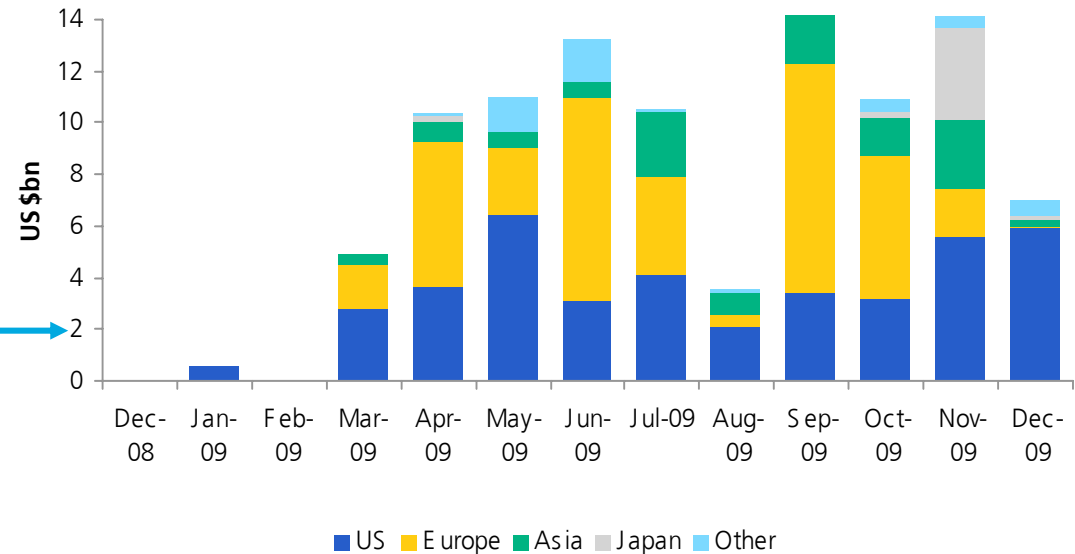
Attribute: supply and new issuance



Annual Convertible Issuance 1998-2009

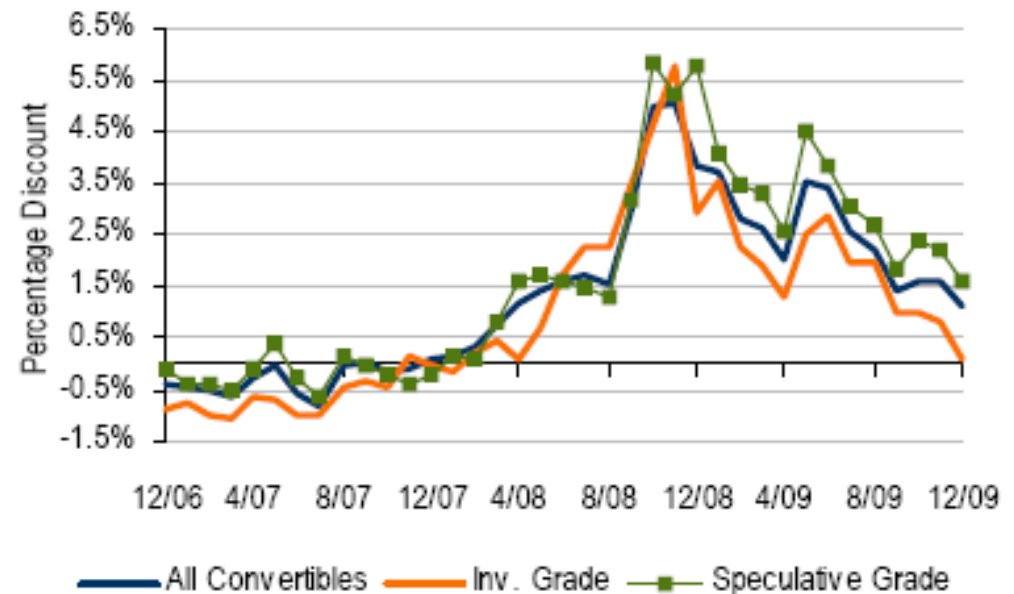
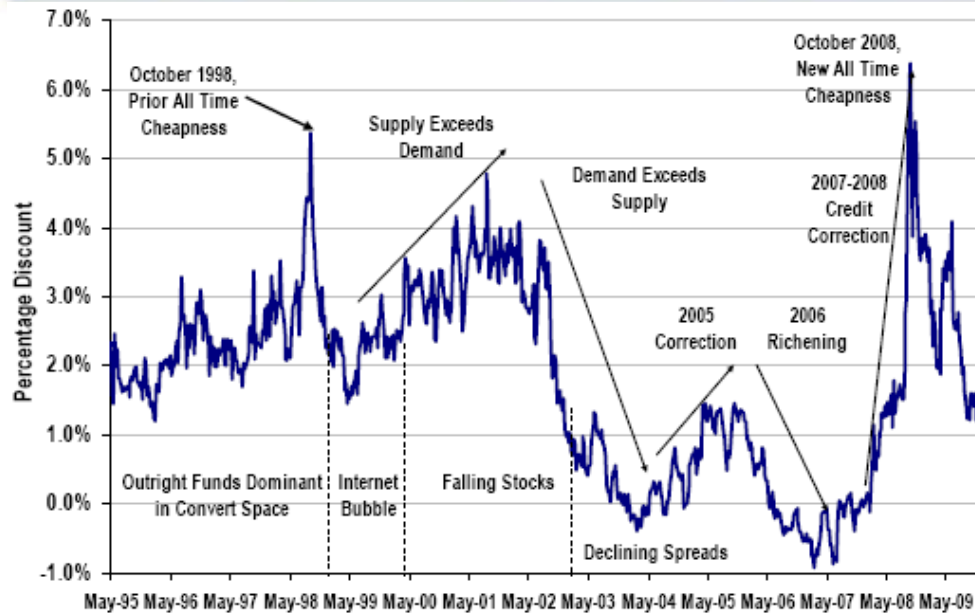


Monthly Convertible Issuance 2008-2009



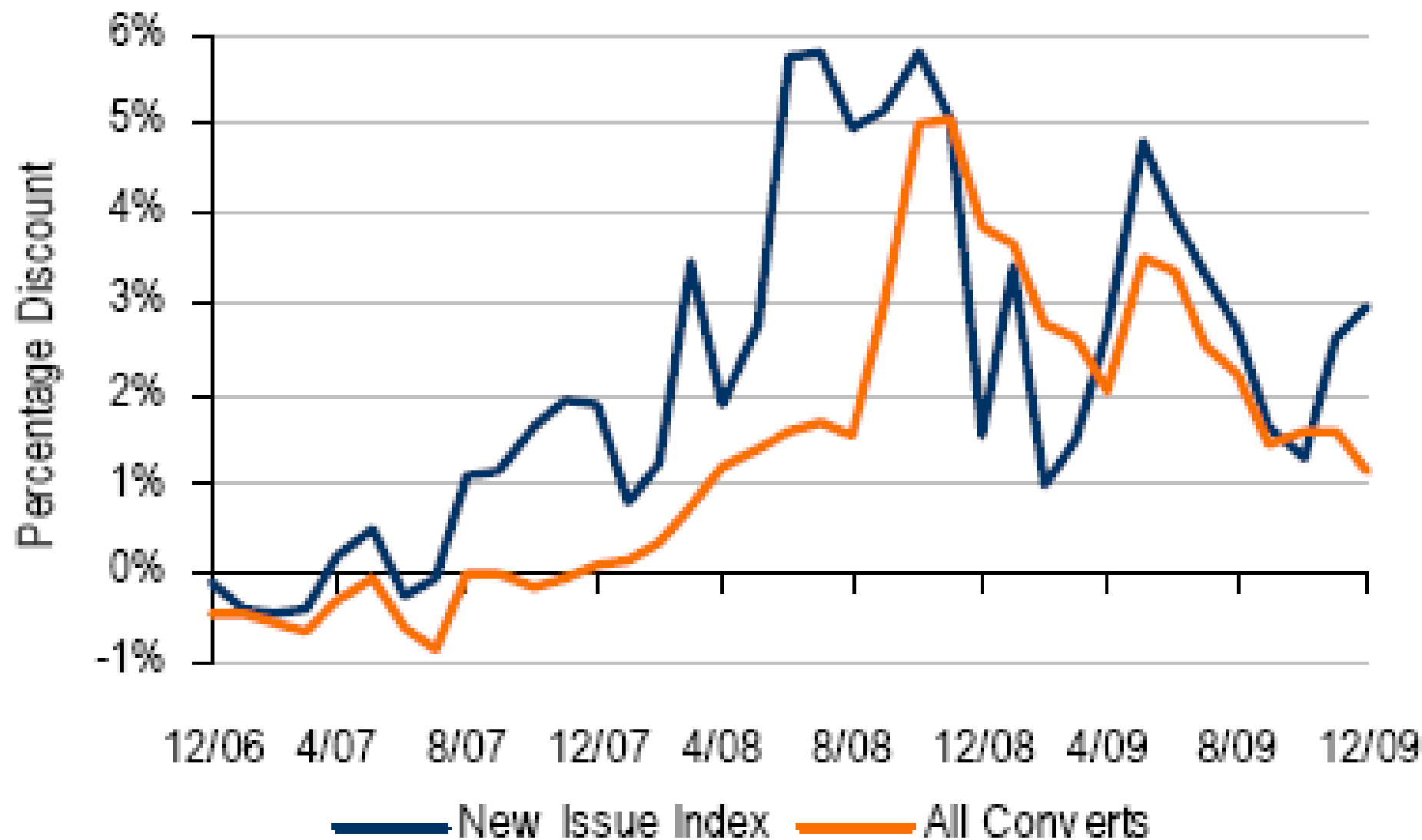
Credit freeze + convertible bond market sell-off = a lot of cheap issuance in 2009

Attribute: cheapness vs. richness of asset class



Convertibles still trade at a discount to bond + option

Average cheapness of new issues



Diversification in practice



**Test for
asymmetry**

Do the embedded options provide an asymmetric return?

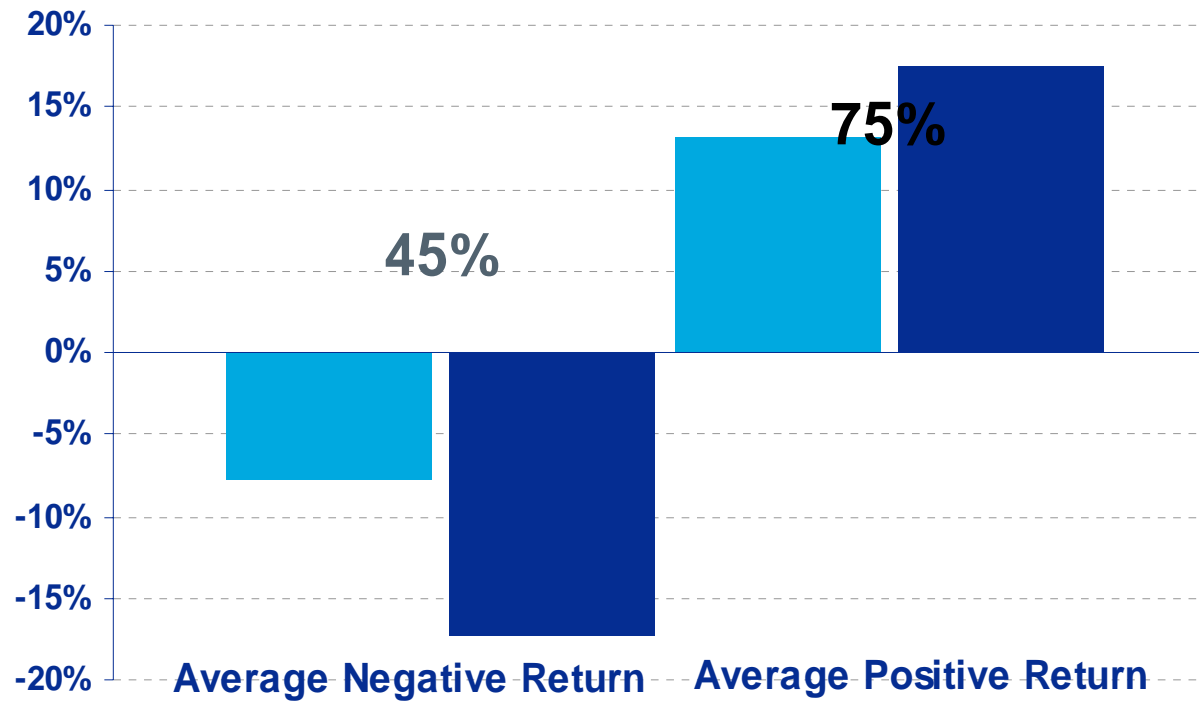
**Historical
test of risk/return
vs. equity/credit**

How did convertible bonds do vs. equity/credit over time?

**Future view of
diversification**

And what do convertible bonds offer vs. equity/credit looking ahead?

Asymmetric returns - yearly profile



■ UBS Global Convertible Bond USD (IN) ■ MSCI World Free TR USD (IN)

Source: Aviva Investors, Lipper. December 1994 - February 2009

Stocks = MSCI World USD; Converts = UBS Global Convertible

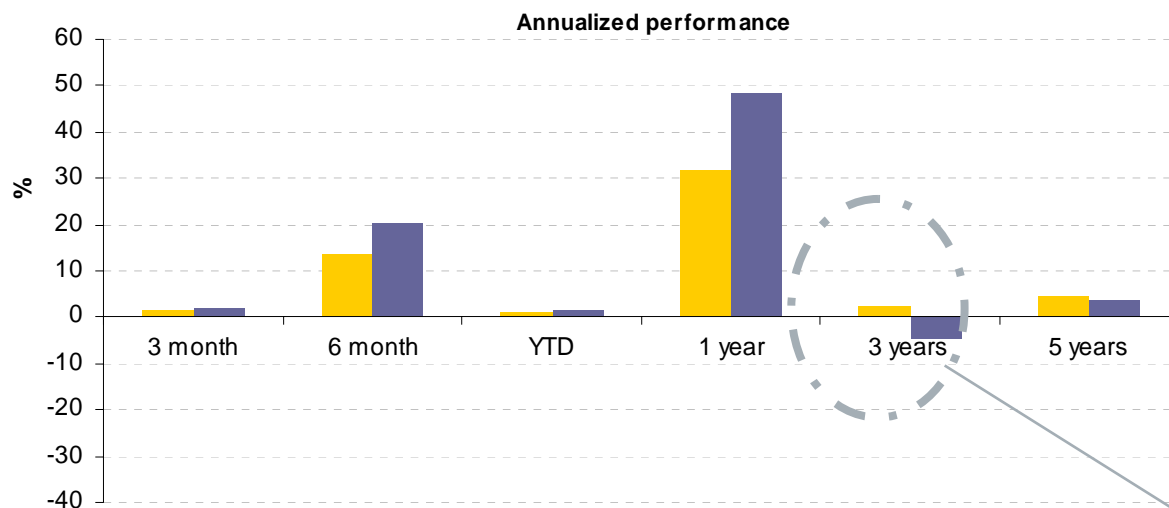
Historical risk and return



December 1989 - December 2009	Annualised return	Standard deviation
All traditional convertibles V0A0	8.99%	11.55%
S&P 500	8.18%	16.86%
Russell 2000	8.34%	20.39%
NASDAQ Composite	9.27%	23.79%
ML Corp. & Govt. Master Index B0A0	6.99%	4.73%

Source: Merrill Lynch as at 31 December 2009

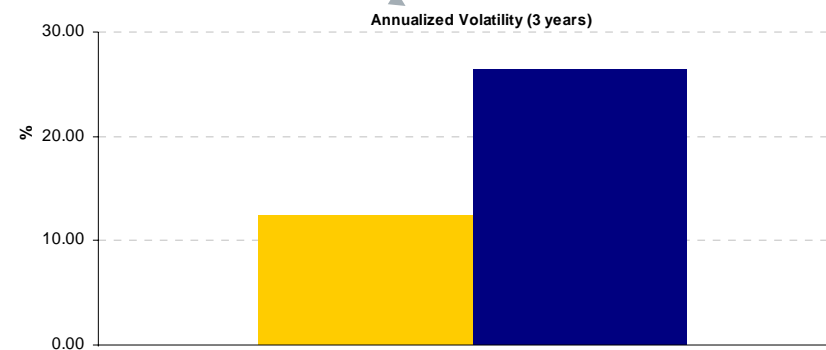
Higher risk-adjusted returns Global convertibles vs. global equities



← MORE RETURN

■ Aviva Investors Global Convertible Fund I-USD LU0160787601 Equity ISIN ■ MSCI World MXWO index

LESS RISK →



■ Aviva Investors Global Convertible Fund I-USD ■ MSCI World USD

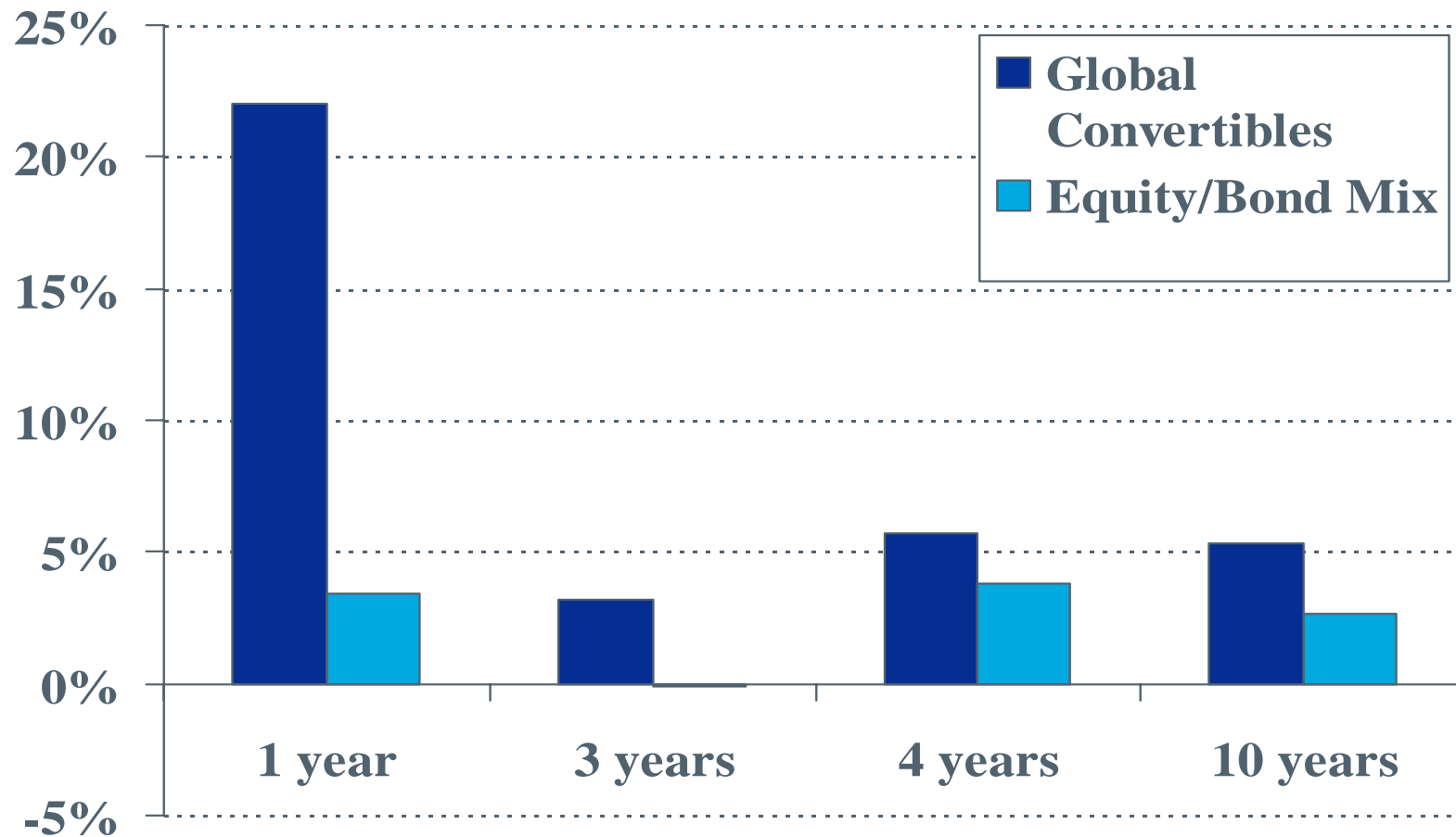
Source: Aviva Investors and Bloomberg, as at 21 January 2010

Performance is provided net of fees for I (USD) share class

Convertibles beat balanced equity/credit fund mix

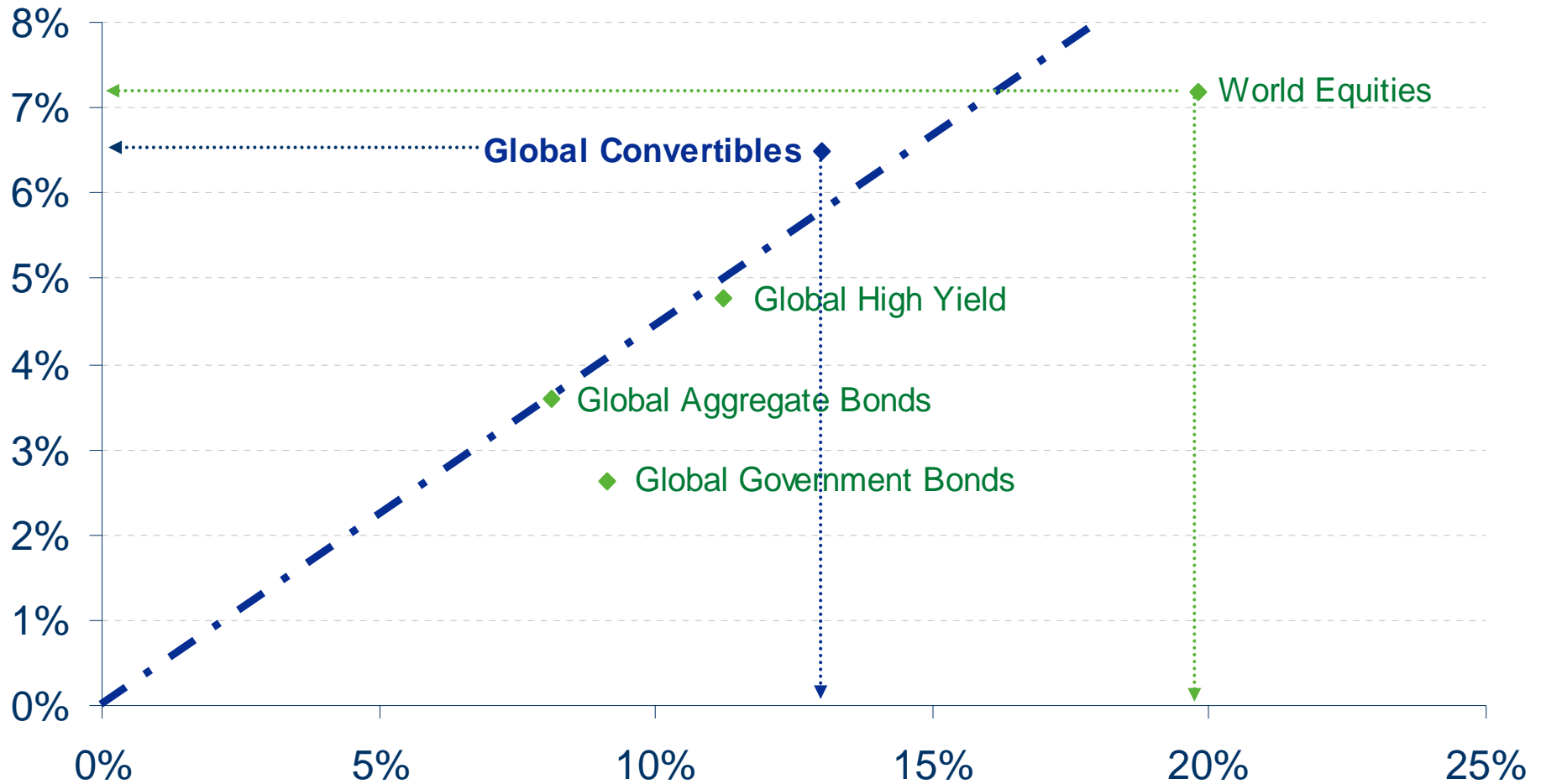


UBS Global CB Index vs. 60% MSCI Equity / 40% JP Morgan Global Agg Credit



Risk and return forecast of asset groups

Long-term forecast (5-10 years)



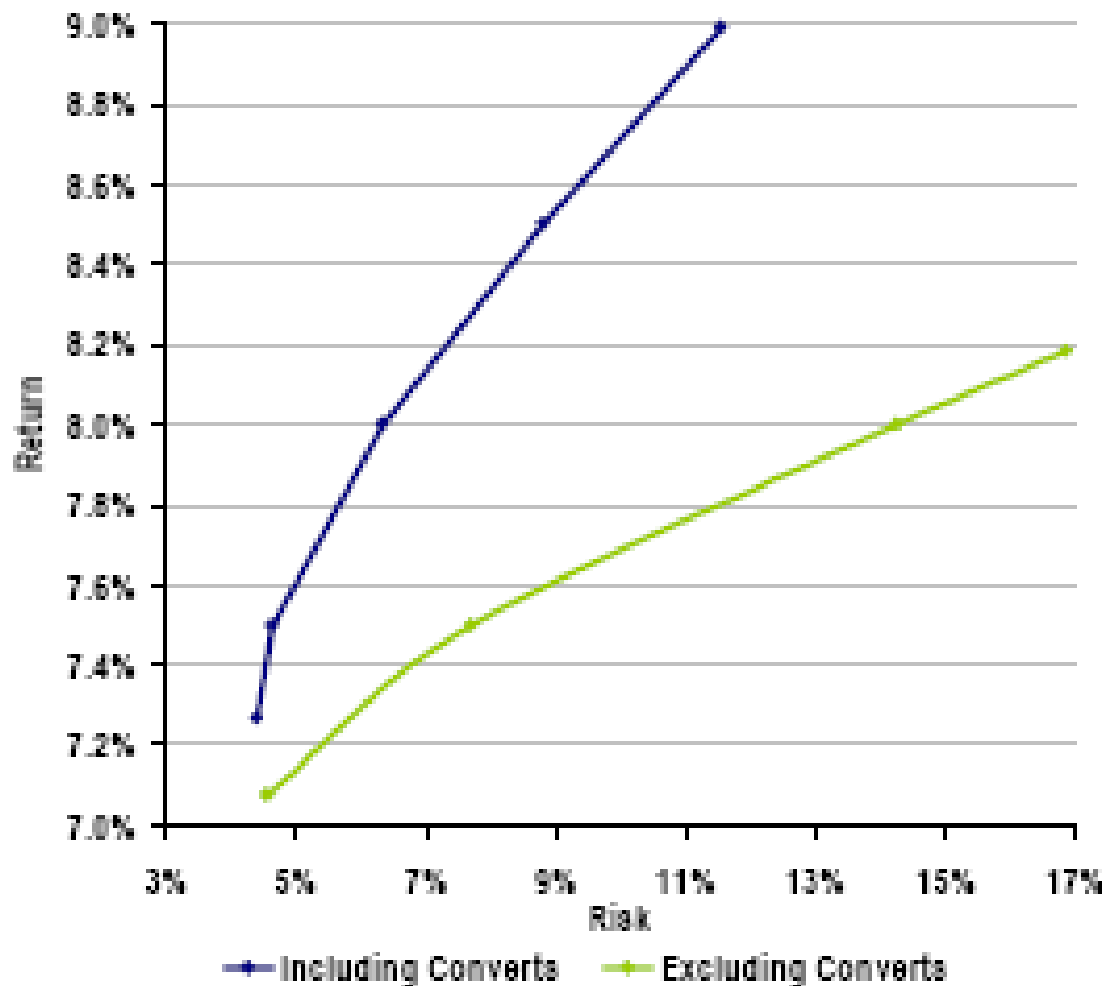
Bringing the current yield, conservative default cost assumption and high volatility forecast

Efficient frontier analysis

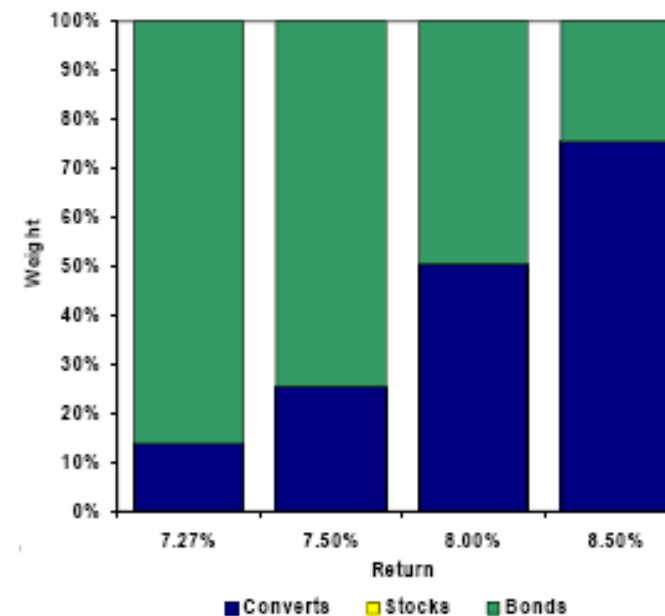
Improved risk/return profile of a portfolio



Efficient frontier



Portfolio mix for the efficient frontier



Efficient frontier for stocks (S&P500 index) & bonds (B0A0 index), with and without convertibles (V0A0 index) (12/31/89-present) - Convertibles expand the efficient frontier.

Source: Aviva Investors / Merrill Lynch Convertible Research (12/1989-12/2009)



Considerations for outright vs. hedged convertible bonds

Issues to consider – hedge vs. outright

Why outright?

- Proven efficient way to access equity/credit markets
- Diversification
- Cost is cheaper than hedged !

Why hedged?

- Direct exposure to the inefficiencies of the asset class
- Absolute return (until it isn't !)
- Fees higher only if fund performs (more efficient pricing)

Or both ?

- Separate total convertible bond risk into directional and attributes
- Have some exposure to outright for equity/credit directional element
- Have some exposure to hedged for direct exposure to attributes

Manager issues with managing hedge and outright



Synergies in process

- Process of analysing fundamentals (equity/credit view) and technicals (gamma shape, rich vs. cheap) are largely the same

Economies of scale

- Convertible bond market equally shared so efficient to be on both sides of the fence
- Systems/people can be used to manage both

Business diversified

- Outright funds provide higher revenue stability
- Hedge funds provide higher margin

Investor issues with hedge and outright managers



Mindset differences

- Can a manager manage vs. an index and vs. libor at the same time?

Focus and priority

- Is the more profitable fund taking higher priority?

Compliance issues

- Are trades dealt fairly across funds?

Convertibles always make sense

- Asymmetry provides high risk-adjusted return
- Attributes of asset class provide diversification

Good case exists to invest both hedge and outright

- Optimise mix by identifying where return comes from
- And then choosing exposure to each based on equity/credit view and risk appetite

Future?

- Perhaps more funds offering both hedge and outright
- UCITS III could offer a middle ground for some

Important information



Except where stated as otherwise, the source of all information is Aviva Investors Global Services Limited (Aviva Investors) as at 31 December 2009.

Any opinions expressed are based on the internal forecasts of Aviva Investors and they should not be relied upon as indicating any guarantee of return from an investment managed by Aviva Investors. No part of this document is intended to constitute advice or recommendations of any nature.

Performance figures sourced from Lipper Hindsight and illustrated on a bid to bid, gross income reinvested basis in the currency shown. Other information sourced from Aviva Investors. The value of an investment in the fund can go down as well as up and can fluctuate in response to changes in exchange rates. Past performance is not a guide to the future.

The distribution and offering of shares may be restricted by law in certain jurisdictions. This document should not be taken as a recommendation or offer by anyone in any jurisdiction in which such an offer is not authorised or to any person to whom it is unlawful to make such an offer or solicitation.

For Germany: Copies of the Full and Simplified Prospectus together with the Report and Accounts of the SICAV are available free of charge from Aviva Investors Global Services Limited, Zweigniederlassung Deutschland - An der Hauptwache 7, 60313 Frankfurt am Main, Deutschland or from Aviva Investors, 34 avenue de la Liberté, 4th floor, L-1930 Luxembourg. R.C.S. Luxembourg B25708.

On 1 April 2008 the SICAV changed its name from Aviva Morley to Aviva Investors. Please read the current Prospectus for full details of the current fund range before investing.

Aviva Investors Global Services Ltd, registered in England No. 1151805. Registered Office: No. 1 Poultry, London EC2R 8EJ. Authorised and regulated in the UK by the Financial Services Authority and a member of the Investment Management Association.

Contact us at Aviva Investors Global Services Ltd, No. 1 Poultry, London EC2R 8EJ