

Shetland Islands Council

#### REPORT

To: Special Shetland Islands Council

27 May 2009

From: Head of Finance

#### Pension Fund Management Annual Review 2008/09 Report No: F-021-F

#### 1. Introduction

- 1.1 The purpose of this report is to inform Members on the position and performance of the Council's Pension Fund external investments with fund managers.
- 1.2 The Pension Fund has three fund managers with total investments, under management at the end of March 2009, of £147 million.

Funds under Management as at 31 March 2009
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Manager	Fund	% of Reserves
Barclays Global Investors	Equity and Bond	92
Schroders	Property	6
Record	Currency	2

- 1.3 Barclays Global Investors (BGI), Schroders and Record will all give presentations at this Council meeting concerning their investment performance over the year to end March 2009.
- 1.4 Karen Thrumble will attend the meeting from WM Company, which is now part of State Street. WM Company are performance analysts and they independently monitor and report to the Pension Fund on each investment manager's performance. Karen will analyse each fund manager's performance relative to the markets they invest in before that Fund Manager's presentation to the Council.

- 1.5 Along with this report are attached the presentational documents from BGI, Schroders and Record plus a performance report from the WM Company on the relevant funds.
- 1.6 In this report I will review each fund manager in turn and compare their performance in 2008/09 against the market performance where they were asked to invest and also against the additional out performance target we asked them to achieve.
- 1.7 Due to the nature of the investments these managers are investing into, we take a long-term investment view, generally a five-year period. I will therefore not only look at each manager's performance over 2008/09 I will also look at their performance over a five year period or from the inception of the mandate if that is shorter.

#### 2. Links to Corporate Priorities

2.1 This report links to the Council's corporate priorities, defined in its Corporate Plan, specifically in relation to assisting the Council in ensuring the financial resources are managed so that the Council can sustain and develop the economy.

#### 3. Background

- 3.1 The Council's Pension Fund is in a growth phase where income from Council and Employee contributions is projected to exceed expenditure for some time to come. Consequently, a long-term investment strategy is appropriate. This allows us to have a higher percentage of equity investments, which in itself produces a greater volatility of returns over the short to medium term, i.e. 1-3 years. Over the long term this investment policy has proved beneficial with the Pension Fund up 13% over the last 5 years and up 62% over the last 10 years.
- 3.2 At the last actuarial review in 2008 the Pension Fund was 88% funded and was one of the best funded Local Authority Pension Funds in Scotland. This funding position allows the Council to have one of the lowest levels of employer contributions in Scotland (16.4%).
- 3.3 The external investments of the Pension Fund (ie other than those invested in the local economy) are co-ordinated by the Council's Treasury function. The Council and Charitable Trust's reserves, although not covered by this report, are also co-ordinated by the Council's Treasury function. This approach delivers a unified approach; ensures that all the funds benefit from the knowledge and experience of Council Officers; and provides useful comparisons.
- 3.4 The Funds, their managers, type of mandate and market value are listed below:

		Market V	alue (£m)
Manager	Mandate	2009	2008
BGI Schroders Record	Equity and Bonds Property Currency	136 9 2	174 10 3
		147	187

- 3.5 During 2008/09 the value of the Pension Fund decreased by £40 million.
- 3.6 In the main, this report concentrates on manager performance relative to the markets but we also need to consider the effect of any cash withdrawals or injections to the funds and the performance of the markets themselves. These influences can easily alter the absolute fund value.
- 3.7 The following table shows the effect on the fund due to withdrawals/additions and the market movement.

	Pension Fund
	£ million
As at 31.03.08	187
(Withdrawals)/Additions	9
Market Movement	(49)
As at 31.3.09	147

The above table shows the market movement has reduced the value of the investments by £49 million during the year. The fall in value is mainly due to the credit crisis that has affected stock markets and economies all over the world. The Pension Fund has a 75% allocation to equities as the Pension Fund can take a long-term investment outlook. This large allocation to equities, because of the falling stock markets, has contributed to the reduction in value of the Pension Fund. The £9 million of additions are due to the difference between the employer and employee contributions versus the pension payments during the year.

3.8 The 2008/09 market performance by asset class is set out below:

		70
Equities:	UK	-29.3
-	North America	-14.0
	Europe	-31.1
	Japan	-10.6
	Pacific (Ex Japan)	-23.1
	Emerging	-26.3
Bonds:	UK	10.3
	Overseas	36.7
	Index-Linked	-1.3
Property		-25.5
Cash		3.6

%

- 3.9 This report reviews performance in 2008/09; a quick update for the first couple of months of this financial year 2009/10 shows a continuing poor global economic situation but we have seen a slight recovery in the stock market from its low in early March 2009. There are mixed views on whether the recent market recover is sustainable or not but the consensus of opinion believes there will be a recovery underway by the end of 2009. In 2009/10 stock markets have recovered some ground and at the 1st May the FTSE 100 was up 5.3% and the Pension Fund had a value of £163 million.
- 3.10 Initial discussions started with Hymans Robertson, the Pension Fund's investment consultants, concerning a full review of the Pension Fund investment strategy. It has since transpired that the Scottish Government have asked the Improvement Service to conduct a review of the Scottish Local Government Pension Scheme, to look at both investment and administrative services. The review will also look at alternative ways to manage these services, i.e. one large centrally controlled Scottish Pension Fund, or perhaps only a few funds, e.g. two or three large Pension Funds. Hymans Robertson are collating the initial data from the Local Authority Schemes and analysing this for the Improvement Service. In light of this review we have effectively put our investment strategy review on hold, at least until the Improvement Service produce their report, which should be in the next few months.

#### 4. Fund Manager Review

- 4.1 The rest of this report takes each mandate in turn and discusses manager performance.
- 4.2 A Fund Manager's performance is measured against a specific fund benchmark, which is made up of market indices of the countries where they invest.
- 4.3 A Fund Manager's target is a level of out performance above the benchmark that is seen as achievable with a low level of measured risk on a given mandate. The Manager will actively seek to produce investment returns in order to achieve the stated target. Performance at or above target is desirable but any returns above the benchmark will add value to the fund above the market return.
- 4.4 Equity and Bond Fund BGI
  - 4.4.1 BGI are the Pension Fund's transition manager and in that role they have the capability to hold funds on a passive basis, i.e. track the market indexes. The Pension Fund is currently making use of this facility, after the decision (min ref 160/08) to terminate Capital International's management of the mandate, until an investment review is concluded and investment decisions acted upon.

- 4.4.2 Even though BGI is investing the fund passively and it is an interim position this is the Pension Fund's largest mandate and it is important to meet and question the manager, and to gain an understanding of the company and their investment process.
- 4.4.3 BGI conducted the transfer of the fund's assets near the end of 2008, with performance monitoring commencing 1<sup>st</sup> January 2009.
- 4.4.4 BGI's benchmark for this fund is based on 45% UK Equities, 45% Overseas Equities, 10% bonds. As the fund is invested passively the benchmark and the target are the same. Performance is therefore compare against the benchmark return.
- 4.4.5 The following table sets out in summary the performance of BGI versus the benchmark return for 2008/09. These figures only cover a three-month period but they give an indication of how closely BGI try to equal the market return.

#### Fund Performance versus Benchmark

	Fund	Performance	
	Return	v Benchmark	
	(%)	(%)	
Jan 09 to Mar 09	-9.1	+0.0	

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (market indices).

4.4.6 The equity and bond fund with BGI decreased by 9.1% in 2008/09, which was equal to the benchmark return. BGI have only managed this mandate for a very short period of time and they are close to the benchmark return, which is the aim of the fund.

#### 4.5 Property Fund - Schroders

- 4.5.1 Schroders were awarded this Property Mandate in March 2007 with the first investments commencing in July 2007.
- 4.5.2 The benchmark for this fund is based on a 100% UK property investment. The fund manager does however have the scope to invest up to a maximum of 30% of the fund in overseas property if attractive investment opportunities exist. Their performance target for this fund is to beat this specific benchmark by 1.0% per annum.

4.5.3 The following table sets out in summary the performance of Schroders versus the benchmark and the performance target in 2008/09, and also on a cumulative basis since inception.

		Fund Return (%)	Performance v Benchmark (%)	Performance v Target (%)
2008/09		-9.6	24.1	23.1
July 07 March 09	to	-8.0	44.4	41.9

#### Fund Performance versus Benchmark and Target

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (market indices).

The performance v target figure gives the percentage that the fund has out or under performed their set target.

- 4.5.4 The Property Fund with Schroders has out performed the benchmark return by 24.1% and the target by 23.1% during a year where property markets fell. The fund in real terms has decreased 9.6% in value but this is not as severe as the fall in the benchmark.
- 4.5.5 On a cumulative basis over the monitoring period since inception Schroders are now a staggering 44.4% above the overall benchmark return and 41.9% above the target return. This out performance is in a period where markets fell in value, the fund has also decreased in value but due to Schroders management the fund has not fallen as far as the property market.
- 4.5.6 This property mandate was initially for £20 million; currently the fund manager has invested about £10 million as they are being cautious given the recent economic turmoil and its effect on the property market. Schroders are only investing into the property market when they find properties at an attractive valuation and are good long-term investments.

#### 4.6 <u>Currency Fund - Record</u>

- 4.6.1 Record was awarded this Currency Mandate in March 2007 with the first investments commencing in June 2007.
- 4.6.2 As this fund invests in currencies there is no standard benchmark that can be used to compare performance against. Record actually uses the monthly Sterling Inter-Bank Offered Rate (LIBOR) minus 0.10% as a performance target. This is the return which I will also review this mandate against, as it is an alternative cash rate to what could have been achieved if the investment was held in a cash product.

4.6.3 The following table sets out in summary the performance of Record versus the benchmark in 2008/09, and also on a cumulative basis since inception.

	Fund Return (%)	Performance v Benchmark (%)
2008/09	-28.5	-31.4
June 07 – March 09	-53.2	-57.0

#### Currency Fund Performance versus Benchmark

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (Cash).

- 4.6.4 The Currency fund with Record decreased by 28.5% in 2008/09, which was 31.4% below the benchmark return. This is an extremely disappointing performance from Record.
- 4.6.5 Cumulatively over the one and three quarter year period of this mandate, the fund has decreased in total value by 53.2%, which is 57.0% below the benchmark return for the same period.
- 4.6.6 This investment is the Pension Scheme's smallest mandate, initially £5 million, due to the volatile nature of currency. Record use a fixed investment process that has performed well over the long term and this investment was made with that long-term investment view.
- 4.6.7 Due to the performance of this fund Record came to Shetland in February 2009 for a special review meeting. The fund manager and the Pension investment were reviewed at that meeting. It was decided to stay with our initial investment view and give Record the long-term investment horizon that we normally give to externally managed investments. Nothing about the company had changed; the investment process, staff and their long-term belief in the currency markets were the same.
- 4.6.8 Record have also altered their investment management fee structure to put the Pension Scheme on a lower fee scale, along with a performance fee which only starts when the fund recovers all losses from inception. This effectively cuts the management fee by 42% until the fund is back to the initial investment level. Record are also giving the Pension Scheme the choice to opt out of performance fees, if the Pension Scheme wishes, once the fund has recovered all losses from inception.

#### 5. Financial Implications

- 5.1 Performance by a Fund Manager will have long-term financial consequences for the Pension Fund.
- 5.2 The performance of the Pension Fund may ultimately affect the contribution rate the Council is required to make. This would be an additional cost / saving to the Council's Revenue accounts.
- 5.3 There are no decisions from this report, so there are no immediate financial consequences.

#### 6. Policy and Delegated Authority

6.1 Day to day responsibility for Fund Management is delegated to the Head of Finance of Executive Services Department and/or his nominees (SIC 25 July 1996 minute reference 97/96). The Council retains responsibility for appointing Fund Managers and for regularly reviewing and questioning a Fund Managers performance (min ref 97/96). This report provides that opportunity.

#### 7. Conclusions

- 7.1 The Pension Scheme is taking advantage of BGI's ability to hold the equity and bond fund and invest it on an index tracking basis. This allows the Pension Scheme to conduct an investment review while continuing to achieve market returns. BGI have managed the fund for only three months and have, as expected, produced a return very close to the markets they are investing in.
- 7.2 Schroders has out performed the benchmark and the target in 2008/09. Cumulatively over the one and three quarter year monitoring period Schroders are also above the benchmark and the target return. Their cautious approach has produced a great start to their property mandate during a very difficult investment period.
- 7.3 The Currency fund with Record has decreased by 28.5% in 2008/09. Record have reduced their fees and attended a review meeting to reassure the Pension Scheme of the long-term viability of their investment process. Currency is volatile and their investment process has not been immune to the effects of the economic crisis but Record uses a strict investment process, which has proved successful over the long term.
- 7.4 During 2008/09 the Pension Fund removed the fund manager of its largest fund and transferred the fund to a passive manager, it has also had to endure the effects of the global economic turmoil on its investments. It has been a difficult and busy year for the Pension Fund, which is reflected in its value. The Pension Scheme will await the outcome of the Improvement Service's report on Scottish Local Authority Pension Schemes before continuing with an investment review.

#### 8. **Recommendations**

- 8.1 I recommend the Council note with satisfaction the performance of Schroders (property fund) in 2008/9.
- 8.2 I recommend the Council note the performance of BGI (equity and bond fund) in 2008/09
- 8.3 I recommend the Council note with extreme dissatisfaction the performance of Record (currency fund) in 2008/09.

Date: 21 May 2009

Rep No: **F-021-F** 

# Schroder Property Multi-Manager Shetland Islands Council Property Portfolio

Geoff Day Client Director

1

Jennifer Murray Fund Manager

27 May 2009

Additional information: Not for distribution



## Agenda

#### Property market update

#### **Portfolio overview**

#### Summary and strategy

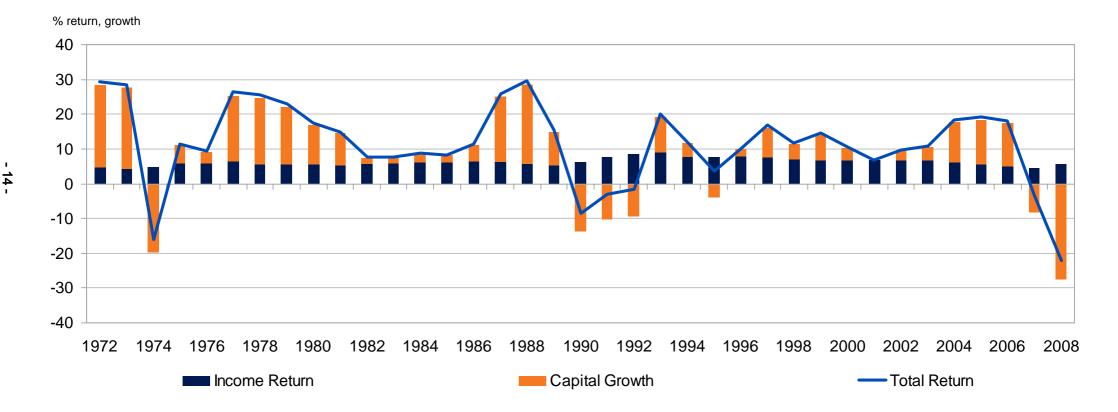
#### Appendices

- 12 -



# Property market update

# UK property market update 1971 - 2008





Source: IPD and Schroders, April 2009

## UK property market update

#### **Facts**

- The fall in capital values is greater than in the 1990s
- This is a demand driven slowdown rather than a speculative development one
- Transactional activity is down
- Financing is tighter, banking covenants are under pressure and debt refinancing levels are likely to remain high
- Tenants are failing particularly in the retail sector, but occupancy rates still over 90%
- Income/ yield on property is beginning to look attractive at 7.0%

#### Unknowns

- Depth and length of the recession
- Return of liquidity
- Where the market will bottom

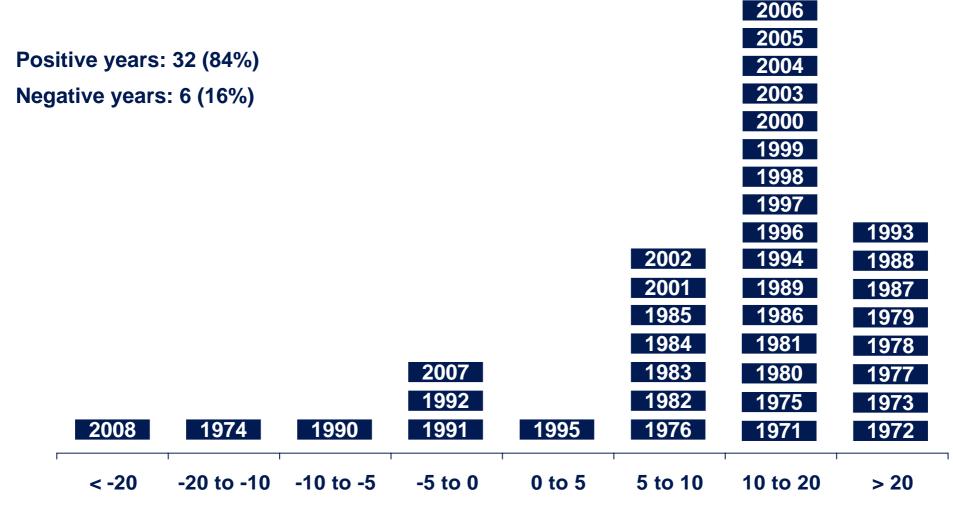
Please refer to Important Information

Source: Schroders, IPD Quarterly Index, December 2008



5

## UK property market update IPD UK Annual Index – nominal total returns



Nominal percentage total return

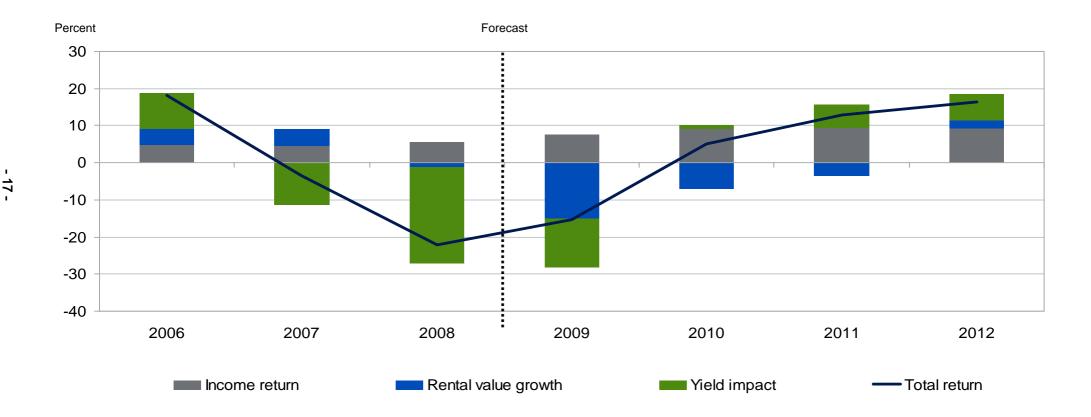


Source: IPD Annual Index, Schroders, 2008

- 16

## UK property market update Forecast total returns and components

#### **Current recession – main scenario**



Please refer to Important Information regarding forecasts



Source: IPD, PMA and Schroders, April 2009

# Continental European property market update

#### Weak returns expected in 2009

Values expected to fall by 25% from peak to trough – albeit there will be wide variations between countries and sectors

- Countries faring better are Germany and the Nordics
- Spain, Ireland and provincial France markets more challenging
- Office markets will vary depending on their occupier base: Frankfurt (finance centre) v Brussels (EU)
- Indexation will benefit rental incomes in the short-term, at least until leases expire
- Issues arising from Q4 2008
- Slowdown in the German economy
- Financial strain and public debt in countries like Greece



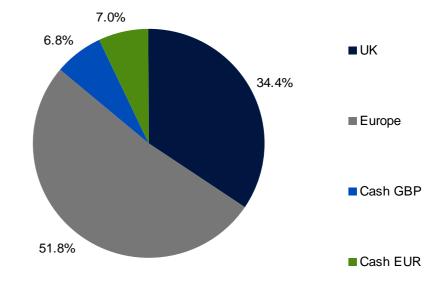
18



## Portfolio overview Portfolio characteristics

- Objective is to outperform benchmark\* by 1.0% pa, net of fees
- Valuation: £9,134,500
- Un-drawn committed funds: £10,000,000
- 5 property funds
- Cash in portfolio held in Schroder cash funds

#### Regional Exposure, 31 March 2009



\* Benchmark is the IPD UK Pooled Property Fund Indices All Balanced Funds Weighted Average

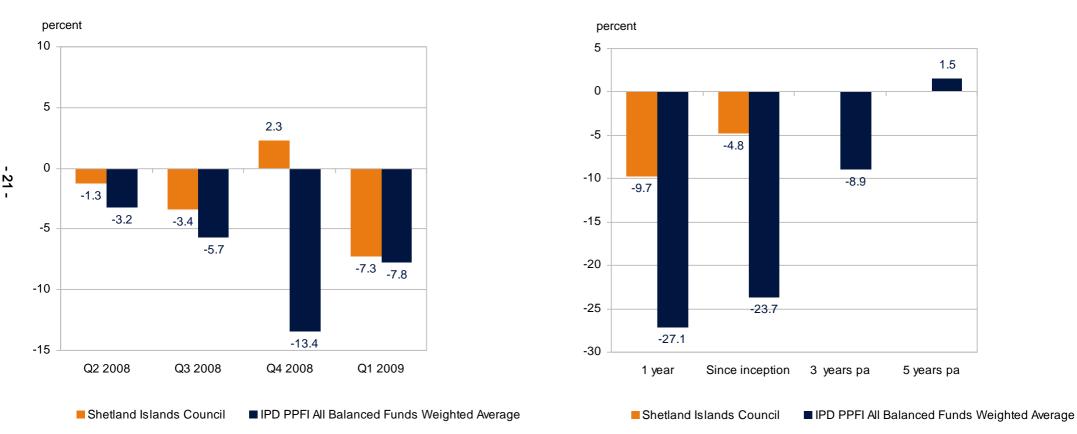


Source: Schroders, 31 March 2009 Data subject to rounding

- 20

## Portfolio overview Performance

#### Total returns versus benchmark, 31 March 2009



Notes: Inception Date; 11 July 2007. The portfolio's returns are calculated on the basis that units in open-ended funds are valued at their mid price and closedended funds at their NAV price. The since inception benchmark figure is supplied by WM.

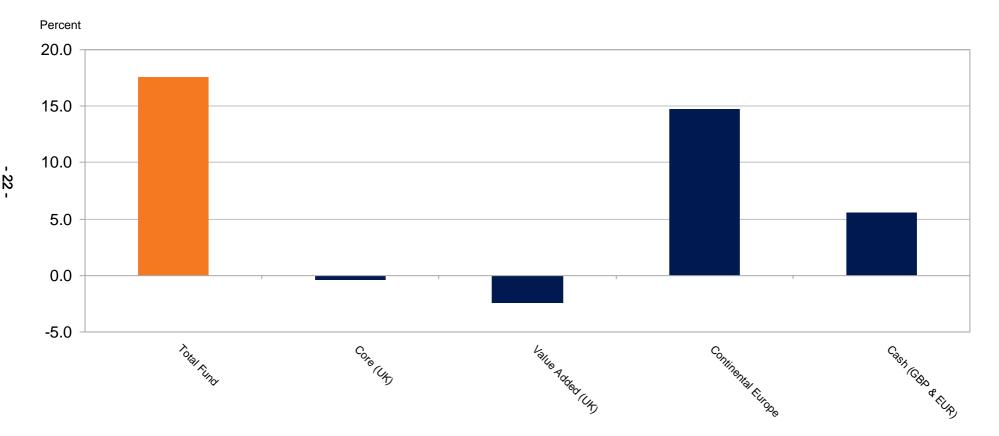


Source: Schroders, IPD UK Pooled Property Funds Indices, WM Company

**Performance attribution** 

#### Total return attribution relative to benchmark

12 months to 31 March 2009



\*Benchmark is UK Pooled Property Fund Indices - All Balanced Funds Weighted Average

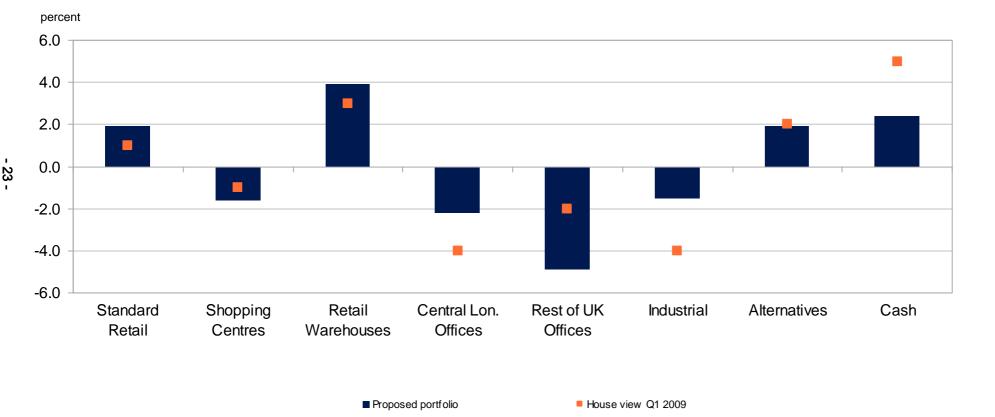
Source: Schroders and IPD UK Pooled Property Fund Indices



11

#### **Proposed relative UK sector weights**

#### Benchmark relative sector weights as at 31 March 2009





Source: Schroders, IPD UK Pooled Property Funds Indices

### **Proposed transactions**

Fund	Region/Sector	Style	Investment (£)	% portfolio	
Proposed transactions					
Standard Life Investments Pooled Pension Property Fund	UK multi-sector	Core	3,000,000	14.5	
Standard Life UK Retail Park Trust	UK retail warehouse	Value Added	1,250,000	6.0	
UK Recovery Fund	UK multi-sector	Value Added	2,000,000	9.7	
L&G Assurance Pensions Management	UK multi-sector	Core	3,000,000	14.5	
UK Core Fund	UK multi-sector	Core	1,500,000	7.2	
Hermes Property Unit Trust	UK multi-sector	Core	1,500,000	7.2	
Threadneedle Property Unit Trust	UK multi-sector	Core	1,500,000	7.2	
Existing investments					
BlackRock UK Property Fund	UK multi-sector	Core	1,204,026	5.8	
Industrial Property Investment Fund	UK industrial	Value Added	687,124	3.3	
UBS South East Recovery Fund	UK offices	Value Added	721,724**	0.0	
UNITE UK Student Accommodation Fund	UK alternatives	Value Added	578,745	2.8	
Schroder CEF I	C Europe multi-sector	Value Added	4,712,089*	22.8	

#### NOTE:

\*Fully drawn commitment \*\* Fund holding will be redeemed in 2009 Source: Schroders. Percentages may be subject to rounding.



- 24 -

#### **Standard Life Pooled Pension Property Fund**

- One of the largest UK balanced managed funds which reinvests income
- Large and diversified unitholder base and historically liquid secondary market
- Overweight to shopping centres and retail warehousing



**Thames Gateway** 



Source: Schroders, 31 March 2009

- 25 -

#### **Threadneedle Property Unit Trust**

- A smaller, income focussed UK balanced fund
- Low asset specific risk
- High distribution yield
- 26 -
- No gearing
- Low risk as no exposure to large scale speculative developments
- Underweight Central London offices but overweight exposure to standard shop units



Old Mill Business Park, Godalming



Source: Schroders, 31 March 2009

# Schroder Real Estate Fund of Funds – Continental European Fund I (CEF I)

### 31 March 2009

#### **Target return**

- 10% per annum total return over the life of the fund

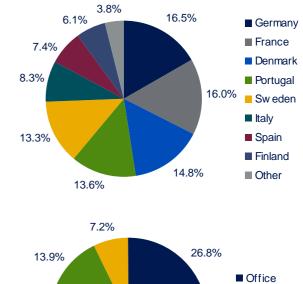
#### Fund update

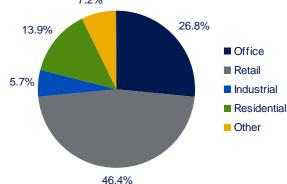
- €243m committed to 13 underlying funds
- 89% of CEF I investors' commitments called
- 31 March 2009 NAV Unit (I units): €880.22

#### **Recent events and strategy**

- Final draw down to be funded on 20 May 2009
- 3.9% of commitments are not expected to be drawn
- Invested in Eurocommercial Properties NV, a listed REIT
- All resolutions approved at recent unit holder meeting

#### Portfolio weighting (%NAV)







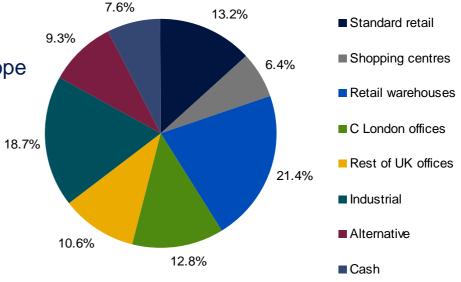
Source: Schroders, 31 March 2009 Percentages subject to rounding

27 -

## Portfolio overview Proposed portfolio characteristics

- Portfolio value of circa £20 million
- Invested across 11 property funds
- Underlying property exposure of approximately £9bn
- 77% invested in UK property, 23% in Continental Europe
- 65% in core funds

#### Proposed portfolio sector weightings



Source: Schroders, 31 March 2009 Data subject to rounding



28

## Summary and strategy

- We continue to be under no pressure to invest but cash is no longer as accretive to performance
- Weak markets provide interesting opportunities
- We are starting to see potential buying opportunities in the UK as market prices re-adjust
- The UK is likely to out-perform Continental Europe over the near term
- The structure of this portfolio will be influenced by the opportunities which arise

- 29





#### Jenny Buck Head of Property Multi-Manager

Responsible for the property multi-manager business. Joined Schroders in 2001.

Investment career commenced in 1992 at Grosvenor Estates where Jenny spent seven years in property asset management and investment covering all the commercial sectors of the UK market. In 1999, she joined Erste Bank as a property banker, responsible for pricing, booking and managing loans as well as buying commercial mortgage backed property bonds.

MA (Hons) in Land Economy. Qualified as a chartered surveyor in 1992.

A member of the Investment Property Forum, Cambridge University Land Society and AREF investor committee.

AREF Investor committee.

Responsible for the investment performance of UK property multi-manager business. In particular this includes the UK investment process, fund analysis and portfolio construction. Joined Schroders in February 2007.

Joined Morley Fund Management in 2004 where he was Fund Manager responsible for their multi-manager team.

Worked for Savills from 1998 as a director in investment agency.

Began his career at Weatherall Green & Smith in 1994 specialising in valuation.

Member of the Royal Institution of Chartered Surveyors, holder of the IMC and a corporate finance representative under the SFA.

BSc (Hons) Geography, Diploma (Comm) in Land Economy.





Graeme Rutter Head of UK Property Multi-Manager



Jennifer Murray Portfolio Manager, Property Fund Adviser to The Schroder Indirect Real Estate Fund (SIRE), portfolio manager for eight segregated clients and retail sector analyst. Joined Schroders in 1999.

Jennifer joined Schroders as retail asset manager on the Schroder Exempt Property Unit Trust. In 2003 she became fund manager of the Schroder Emerging Retail Property Unit Trust, an award winning fund, and in 2005 transferred to the property fund of funds team.

Jennifer specialises in the retail sector and opportunity funds.

Qualified as a chartered surveyor with Weatherall Green & Smith in 1996 and worked in investment valuation, management and agency principally in the office sector.

MA (Hons) in Geography and an MSc in Land Management and Development.

Member of the Royal Institution of Chartered Surveyors.



Anthony Doherty Portfolio Manager, Property Investment career commenced in 2000 when he joined Schroders as an economist. A year later he moved into the property team as a research analyst and subsequently moved into the multi-manager team in 2004.

Tony's specialism is the industrial and office sectors. Tony also concentrates on risk management and the offshore property investment company sector.

BSc (Hons) in Economics and Business

A Member of the Society of Business Economists and the Society of Property Researchers and holder of the Investment Management Certificate





Jas Chahal Portfolio Manager, Property Responsible for portfolio management, client servicing, portfolio analysis and strategy in the multi-manager team. Jas specialises in alternative sectors of the property market such as hotels, residential and student accommodation. Joined Schroders in 1998.

Commenced her investment career in Singapore in 1995 at Colliers Jardine as a research analyst. Moved to London in 1997 and joined Jones Lang Wooton Fund Management (now Lasalle Investment Management) as a Senior Analyst. Joined Schroders in the property research and strategy team and then in 2000, became the Head of Investor Relations. In June 2006 she moved to the multi-manager team.

BSc (Hons) in Estate Management

Member of the UK Society of Investment Professionals. Investment Management Certificate (IMC)

Client Director in our dedicated Client Servicing team, based in London

Joined Schroders in 1996

Joined Flemings as a fund manager for pension funds and charity clients in 1987. Investment career commenced in 1980

Degree in Business Studies, University of Plymouth





Geoff Day Client Director

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# Appendices

- 34 -



## Property multi-manager UK investment team



Jenny Buck Head of Property multi-manager 16 years real estate experience



**Graeme Rutter** Head of UK property multi-manager 14 years real estate experience



Source: Schroders, December 2008

Tony Doherty Property fund manager 8 years real estate experience Quantitative and business space specialist



Jennifer Murray Property fund manager 14 years real estate experience Retail sector specialist



**Jas Chahal** 

Property fund manager 12 years real estate experience Alternative sector specialist

Property Research – London Mark Callender, Alex Williamson, Patrick Bone

London Tamsin Frost, Tom Dorey, Keeran Kang

Auministration & Operations

Trading, Pricing, Valuation, Performance, Legal, Tax



35

## Shetland Islands Council Portfolio – investment restrictions

Maximum in one fund	30%
Maximum with one manager	40%
Minimum in open ended funds	40%
Maximum exposure outside the UK	30%

GNAV = NAV plus undrawn contributions Source: Schroders



- 36 -

#### Continental European Fund I – investment restrictions

None except for short term secured against investment commitments	
Max 60% of consolidated GAV over long period Max 75% of GAV in any one fund	
Max 20% of GNAV (*)	
Max 30% of GNAV with any one manager	
Max 30% of GNAV to any one country	
sure Max 20% of GNAV exposure to development	

GNAV = NAV plus undrawn contributions Source: Schroders



- 37 -

#### Important information

Participation in the Schroder Property multi-manager service may involve investment in various asset classes including property equity and collective investment schemes ("Funds") within the meaning of Section 235 of the Financial Services and Markets Act 2000 ("FSMA"). Most of these Funds are not authorised unit trust schemes, OEICs or recognised schemes within the meaning of the FSMA and therefore constitute unregulated collective investment schemes.

Investors and potential investors should be aware that past performance is not a guide to future returns. No warranty is given, in whole or in part, regarding performance of the portfolio and there is no guarantee that the investment objectives will be achieved. The value of units and other investments and the income from them may fluctuate upwards or downwards and cannot be guaranteed. Property-based pooled vehicles such as property unit trusts, invest in real property, the value of which is generally a matter of a valuer's opinion. It may be difficult to deal in the units or to sell them at a reasonable price, thus creating a liquidity risk. There may be no recognised market for units in the Funds and, as a result, reliable information about the value of units in the Funds or the extent of the risks to which they are exposed may not be readily available. A potential conflict with the Manager's duty to the client may arise where the Manager invests in units in a Fund(s) managed by itself or an Associate. However the Manager will ensure that such transactions are effected on terms which are not materially less favourable than if the potential conflict had not existed.

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39 -

Registration number 1188240 England





Active Currency Mandate Performance Review

#### Shetland Islands Pension Fund and Shetland Charitable Trust

27<sup>th</sup> May 2009

## Agenda



- Mandate specifications and objectives
- Performance Shetland Islands Pension Fund
- Performance Shetland Charitable Trust
- Performance review
- Appendix



# **Shetland currency mandates**

- Fund: Record Currency Alpha Cash Plus (7 times geared currency strategy)
- Investment objectives:
  - Expected annual currency return of 21% plus £ interest
  - Expected tracking error 30% p.a.
  - Currency Universe : USD, EUR, GBP, CHF, JPY, AUD, CAD, NZD, NOK, SEK, SGD

#### **Shetland Islands Pension Fund**

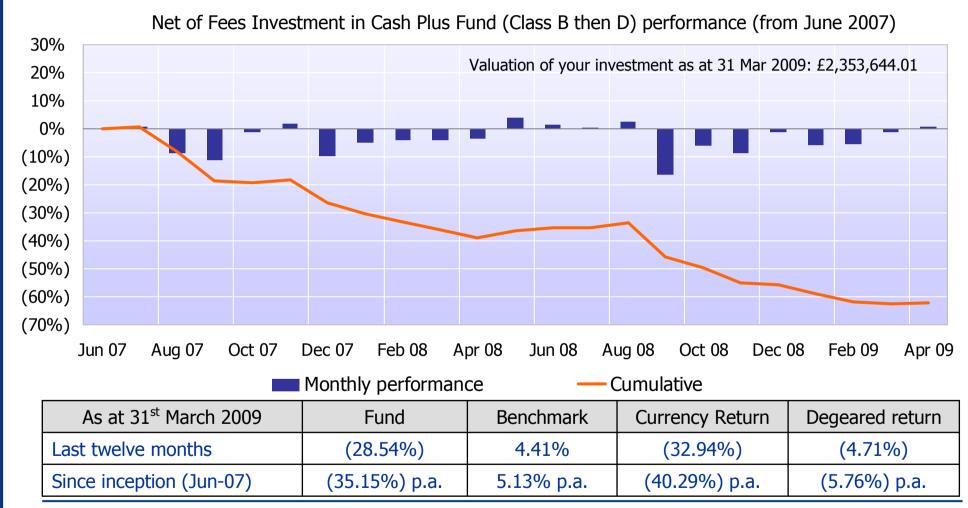
- Switched from Unit Class B to D (1<sup>st</sup> April 2009)
- Inception: 26<sup>th</sup> June 2007
- Investment size: £ 5,000,000

#### **Shetland Charitable Trust**

- Switched from Unit Class A to B (2<sup>nd</sup> July 2007) to D (1<sup>st</sup> April 2009)
- Inception: 17<sup>th</sup> October 2006
- Investment size: £ 3,000,000

# **Shetland Islands track record**

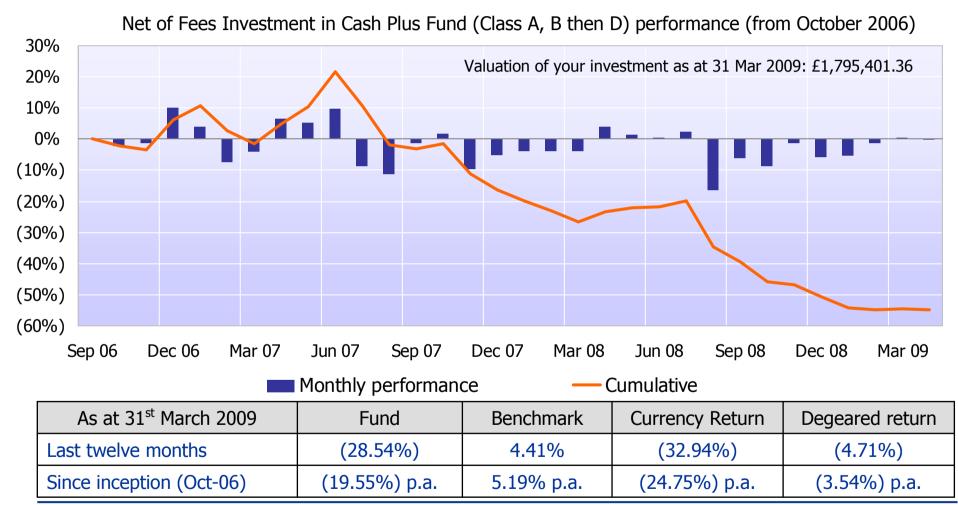




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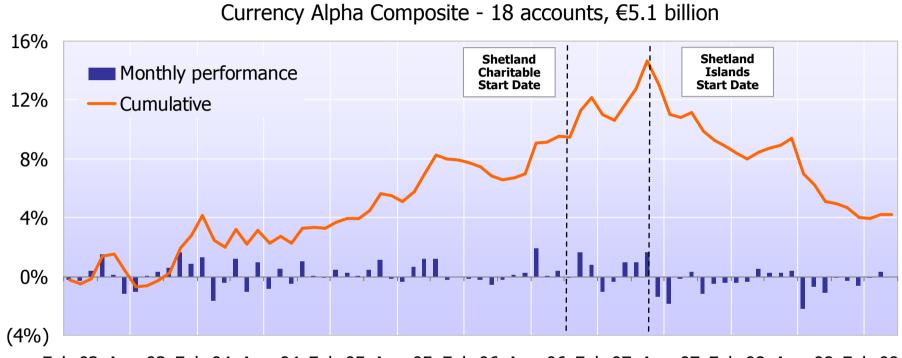
# **Shetland Charitable track record**





# 6 year live track record (ungeared)





Feb 03 Aug 03 Feb 04 Aug 04 Feb 05 Aug 05 Feb 06 Aug 06 Feb 07 Aug 07 Feb 08 Aug 08 Feb 09

As at 31 <sup>st</sup> March 2009	Value added	Tracking Error	Information Ratio
Since inception (Feb-03)	0.67% p.a.	2.94%	0.23

Source: Record Currency Management. Returns of all clients in the composite are weighted in US dollars and scaled to a gearing ratio of one. The volatility of returns will be greater if higher leverage is applied. Client numbers and assets are correct as at 31st March 2009. April return is provisional.



# Longer term performance (ungeared)



As at 31 <sup>st</sup> March 2009	Value added	Tracking Error	Information Ratio
Entire period (Feb-92)	2.39% p.a.	3.82%	0.62

Source: Record Currency Management. Simulated returns are for information only. April return is provisional.

# **Commentary – 2008**



- Q1 2008 was characterised by record FX volumes, strong anti-carry price movements, and high equities : 'investment currency' correlation
- Q2 2008 was modestly positive with improved FRB success rate and some trends in favour of investment currencies – correlations and volumes both fell in June
- Q3 2008 strongly negative July's positive performance was more than offset by underperformance of the fund during August (our worst month for the live process since inception in February 2003) and September
- Q4 2008 returns were negative. October saw the largest currency moves in some pairs in the history of free-floating exchange rates. Sterling depreciated against major currencies contributing to underperformance. Volatility levels were unprecedented, and trading conditions difficult

8

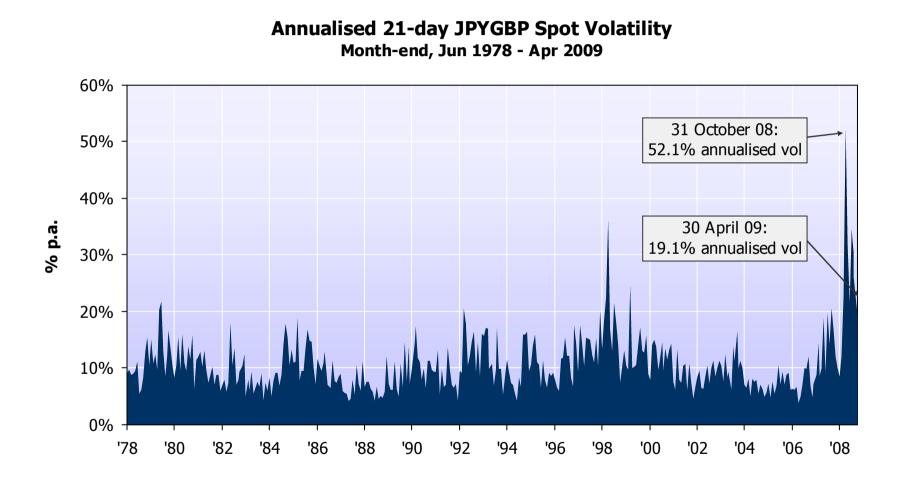
## **Commentary – 2009**



- Jan JPY was strong throughout the month, hence level of gearing remained low, 'gap losses' were within historical averages
- Feb JPY depreciated in highly volatile daily environment; 'gap losses' were higher than average and this resulted in slightly negative monthly performance
- Mar EUR strengthened, JPY and CHF weakened increasing levels of gearing. Daily volatility remained high which resulted in higher than average 'gap losses' but the overall monthly performance was positive
- Apr Both EUR and GBP strengthened at the beginning of the month but weakened towards the latter part of the month. Volatility remained higher than normal but continued to decline. Gap losses were average

### **JPYGBP** spot rate volatility





Source: Record Currency Management, WM/Reuters. Annualised volatility of 21 period interval of WM spot rate as at month end.

50-

# What principles do Record rely on ?



We believe that:

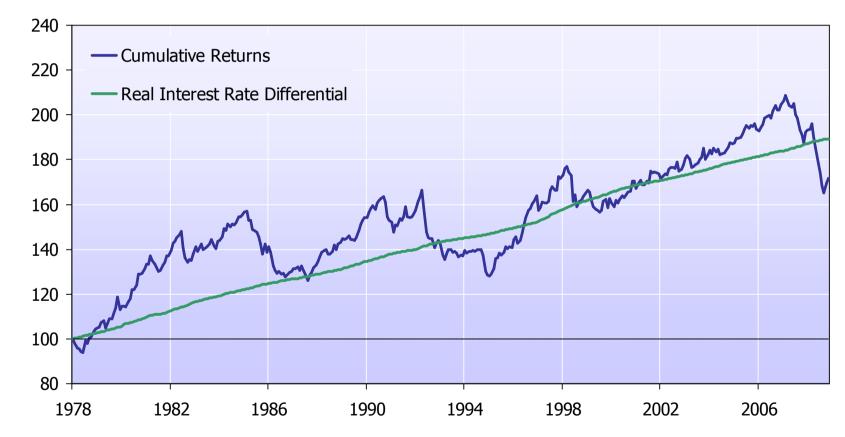
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- High interest rate (developed) currencies will out-perform in the long term (and low interest rate currencies under-perform)
- The 'raw' volatility of this effect is high, and so we employ a loss-control mechanism, which exploits 'momentum' in currencies
- The source of the high interest currencies' out-performance is real interest rate differentials
  - These cannot be arbitraged away, since Governments demand autonomy and control over short-term interest rates

## 30 year FRB returns



Cumulative Excess Returns of conservative FRB model Index May 1978=100; 10 pairs, no selection, 1m forwards, no leverage, costs included



\* All trading costs associated with closing existing positions and opening new positions each month are included in these returns. The estimated trading costs used were at the high end of expectations throughout. Source: Record Currency Management

## **Two systematic processes**



#### Diversification and Systematic Risk Controls

Two independent investment processes

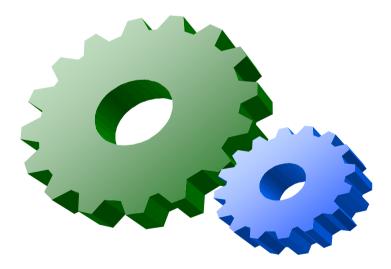
#### • TREND / FORWARD RATE BIAS

- 5/6<sup>th</sup> of programme
- Substantial value added

#### RANGE TRADING

- 1/6<sup>th</sup> of programme
- Overall volatility reduction

More stable return pattern



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# **Currency pair selection**



	Trend/FRB		Range Trading		
Mar	Apr	May	Mar	Apr	May
JPYGBP	JPYGBP	JPYGBP			SEK-EUR
JPYEUR	JPYUSD	JPYEUR			
CHFGBP	CHFGBP	CHFGBP			
CHFEUR	CHFUSD	CHFEUR			
JPYNZD	JPYNZD	JPYNZD			
SEKNOK	SEKNOK	SEKNOK			
SGDGBP	SGDGBP	SGDGBP			
CHFAUD	CHFAUD	CHFAUD			

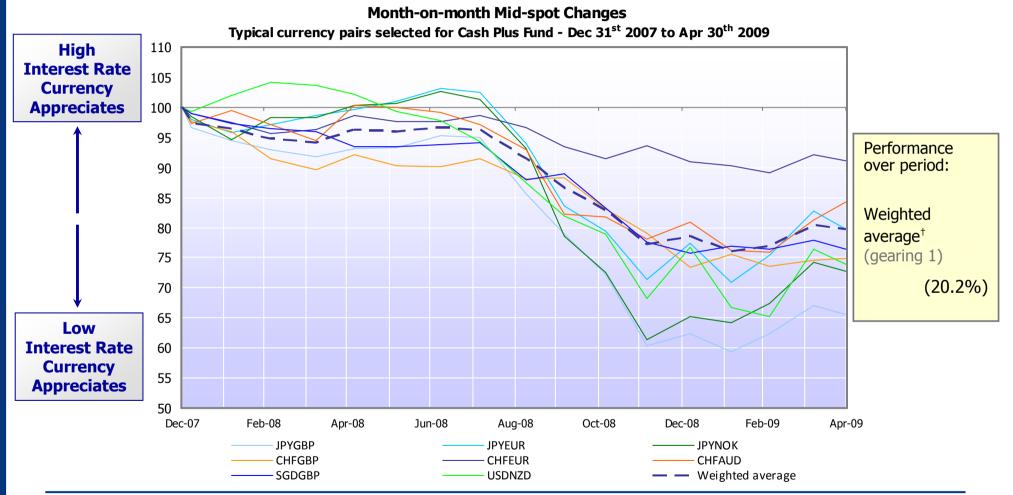
denotes **SHORT** currency position denotes **LONG** currency position

<u></u>4

Source: Record Currency Management, new currency pairs selected for inclusion in Cash Plus Fund T1 & T101 in the three months to May 2009

# **Spot price movement 2008/9**





Source: Record Currency Management, WM/Reuters. <sup>†</sup>Selection is based on Cash Plus Fund – T1/T101 and occurs on the 5<sup>th</sup> day of each month. The 8 pair selection (as opposed to 6 pair) was gradually introduced from 1<sup>st</sup> April 2008. The 8 currency pairs shown here in conjunction with the weighted average are not necessarily selected each month, but are most indicative of the pairs selected over the entire period. \*Based on Cash Plus - GBP CLS A share class currency performance.

#### RECORD CURRENCY MANAGEMENT

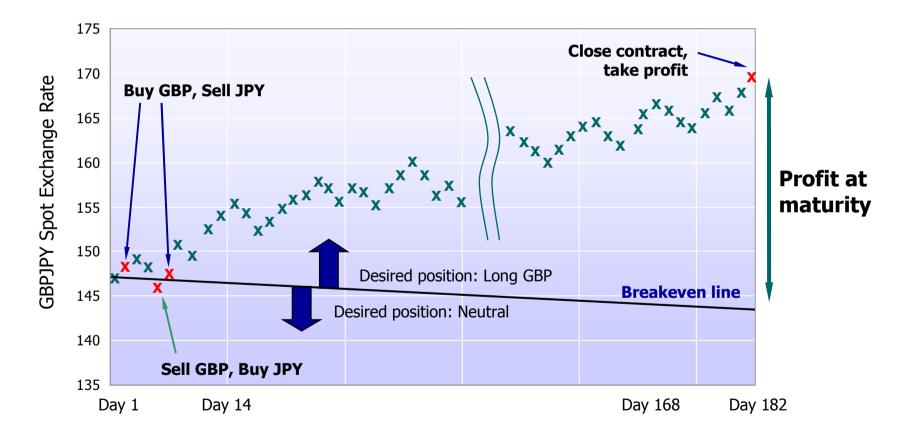
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### **One component of the 48**



If the £ strengthens vs. the ¥, the process allows profits to run

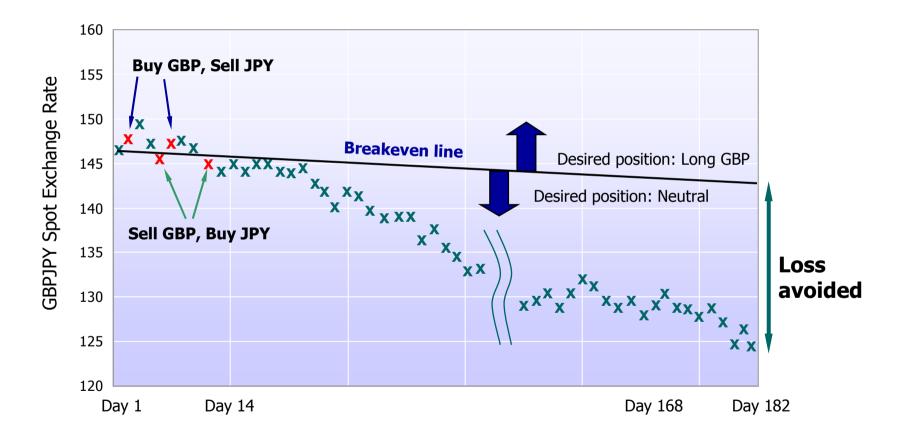


Note: The manager observes the prices periodically and systematically closes positions below the breakeven line at the point of observation. Profits will be reduced by the associated trading costs

### **Managing losses**



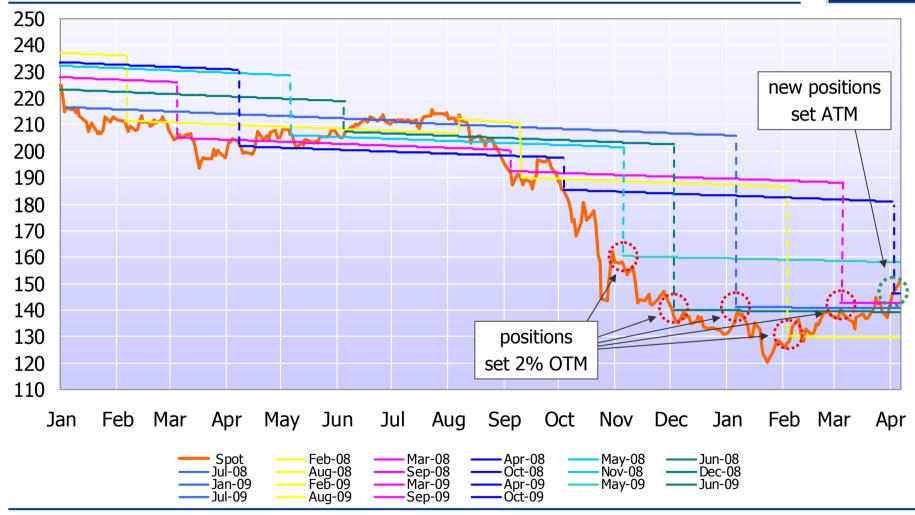
If the £ weakens vs. the ¥, the process automatically closes positions



Note: The manager observes the prices periodically and systematically closes positions below the breakeven line at the point of observation



# **JPYGBP** positions



Source: Record Currency Management, based on Cash Plus Fund T1 & T101

# Outlook



We do not believe that the current low interest rate environment undermines the long-term prospects for FRB

- Historical correlation between the size of annual FRB returns and the size of interest rate differentials is not strong
- Spot rate movements contribute a significant proportion of the total FRB returns. Spot rates tend to respond to the tightening or loosening of monetary policy and reinforce the interest rate differential signal
- We believe interest rate differentials are driven by fundamental differences between economies, and that the degree of global harmonisation required to erode these differences is unlikely at this stage of recession or early stages of economic recovery

# Update on the investment process



- Permanent changes
  - 'Variable day trading' fully implemented
- Temporary measures reviewed monthly by Investment Committee
  - New Trend/FRB 'break even' lines set at-the-money as per normal running of the investment process
  - Range trading reinstated in May

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## **Update on Record**



- AUM: £21.7 billion as at 31<sup>st</sup> March 2009
- Staff: 64 people (incl 3 contractors)
- IPO in December 2007
  - Currently 66% employee-owned
    - Maintain culture
    - Maintain substantial personal exposure
    - Widen staff share ownership

<u>6</u>

# **Updated organisation structure**

Chairman & CEO Neil Record\* Managing Director, Clients Chief Financial Officer Managing Director, COO Managing Director, CIO **Leslie Hill Paul Sheriff** Peter Wakefield\* **Bob Noyen\*** Portfolio Client Compliance Reporting **Business** Product HR Trading Systems Legal Finance Operations Research Team & Risk Services Management Analysis Development Director Director Director Director Director Director Director Director T Beal S Wahedally J Sleigh D Tikhonov\* C Jackson R Bloom\* D Murphy I Harrison C Beckley Wood-Collins A Jackson Associate Dir J Diack J Rockall C Scollan K Ayles TBA R Llovd J Manning A Rumyantsev S Williamson J Edbrooke S Cullen J Mills J Corominas Y Doumenis M Delaloye TBA R-J Klop L Pharro G Laurie A Spiers S Bansi S Varkey D Wells<sup>†</sup> D Patel A Graham<sup>+</sup> M Bolton S Prashar P Sen P Beaslev A Pavitt C Murray R Ananth<sup>†</sup> M Pagdin A Sands O Svirsky S Fraser-Green B Trivedi H Powlson M Joshi R Kamath F Maktari P Patel R Heffer S Bagga J Brown R Colonna KEY S Jawahar M Townshend **Group Board Director** S Khan A Prasad Director of RCM Associate Director

RECORD

\* Investment Committee member

+ Contractor

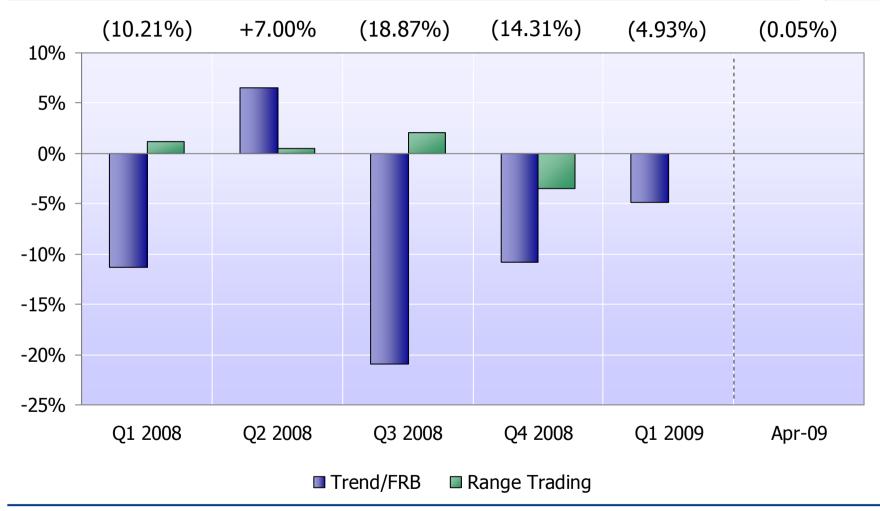


# Appendix

- 63 -

# **Cash Plus performance attribution**

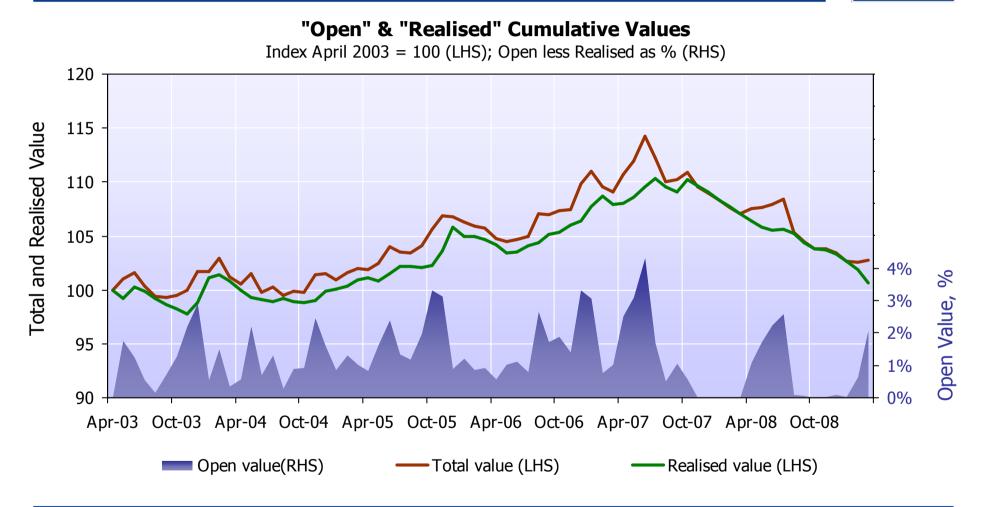




Note: attribution is done on the basis of Cash Plus – Class A currency returns. Trend/FRB, Range Trading attribution is estimated.

## **Open and 'locked-in' value** (gearing 1)



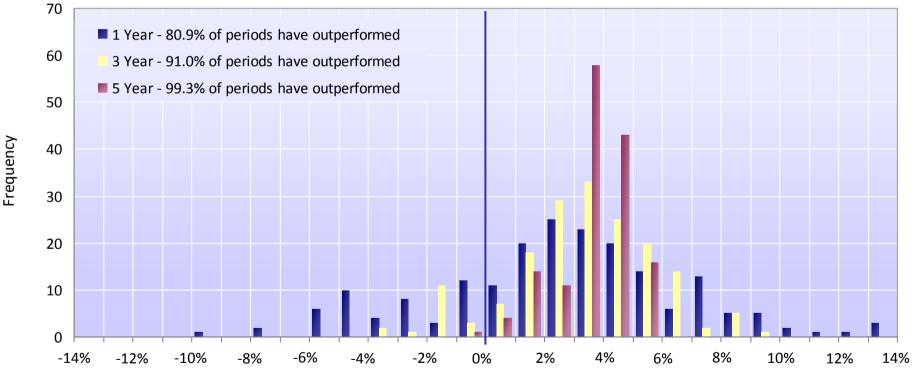


Note: Based on live returns of 2 segregated accounts (May-2003 to Feb-2007 and Mar-2007 to Mar-2009). Returns scaled to gearing 100%. Open value is estimated.

# **Rolling returns - longer term**



#### Distribution of Rolling Annualised Returns for Alpha Composite Simulated from Feb 1992 - Live from Feb 2003 to Mar 2009



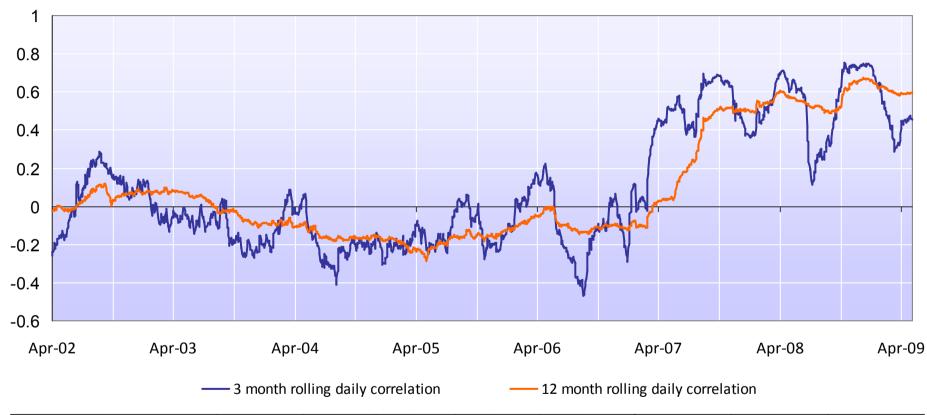
Annualised Return

Source: Record Currency Management. Returns of all clients in the composite are weighted in US dollars and scaled to a gearing ratio of one. The volatility of returns will be greater if higher leverage is applied. Past performance is no guarantee of future returns and the value of investments may fall as well as rise. Simulated returns are for information only.

26

# **Correlation of FTSE 100 and JPYGBP**





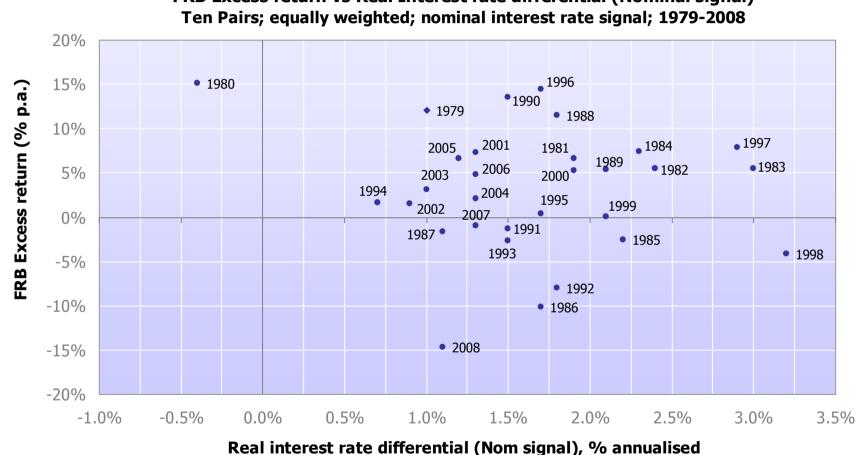
	2002	2003	2004	2005	2006	2007	2008	2009*
Annual correlation	0.06	(0.09)	(0.17)	(0.13)	(0.12)	0.50	0.66	0.42

Source: Record Currency Management, Bloomberg. Based on daily observations. Correlations calculated to 5<sup>th</sup> May 2009. \*Correlation for partial year to 5<sup>th</sup> May 2009

27



## **Real interest rate differentials**

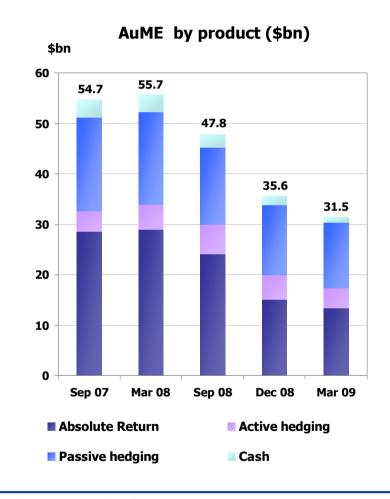


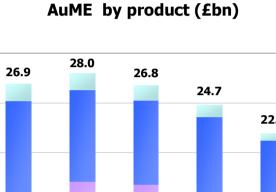
FRB Excess return vs Real Interest rate differential (Nominal signal)

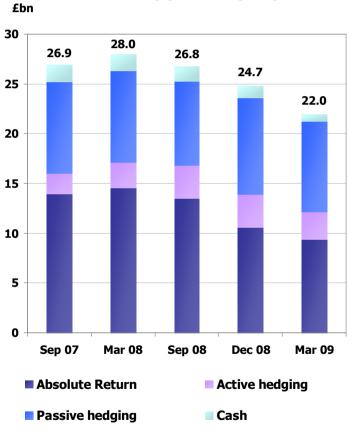
Source: Record Currency Management, GS 2009 forecasts.

## **AuME attribution**





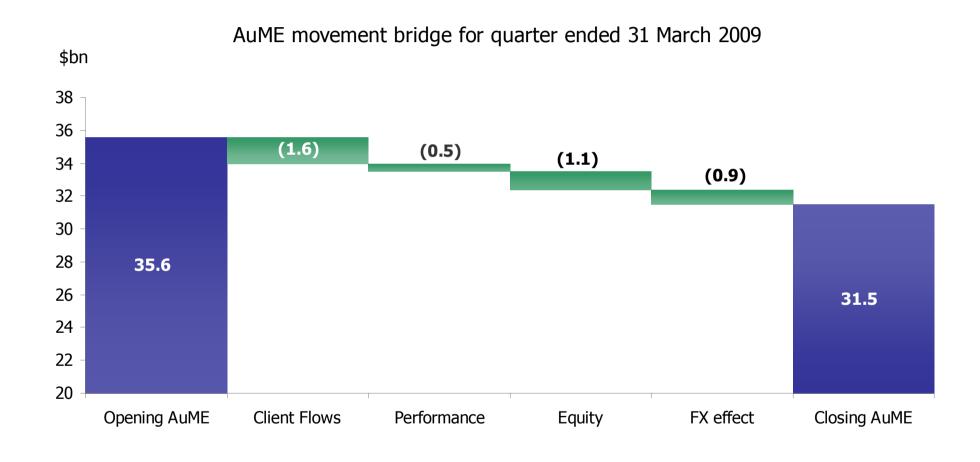




AuME shown as at period end.

### **AuME movement**





## **Record staff update**



#### Total Staff: 63 people

Losses (Q1 2009)

Name	Role	Date	New role
Sebastian Jans	Associate Director, Operations	February 2009	

#### • Gains (Q2 2009)

Name	Role	Start Date	Previous Employer
Jayne Diack	Associate Director, Legal	April 2009	Threadneedle

- 71 -

#### RECORD CURRENCY MANAGEMENT

72

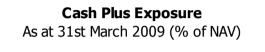
## **Credit control**

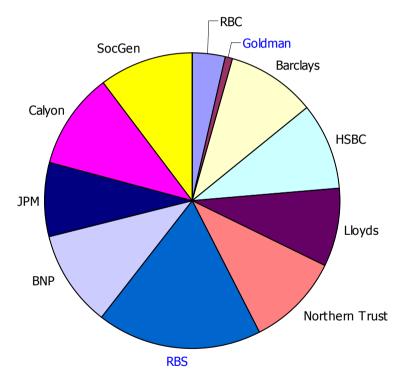
- minimum long-term credit rating of A1/A+
- regularly review counterparties
- equity and credit default swap prices and rating agencies' outlook on credit ratings
- 'excess' margin from investment bank prime brokers removed
- increased credit diversification of cash deposit portfolios



(i) the initial margin;

- (ii) any excess margin above MTM that we have left there (as low as practicable);
- (iii) any other time deposits (nil in the case of GS).







# **Risk warnings**



All data, unless otherwise stated in the footnote of the relevant page is as at 27-May-2009.

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The investment process described represents the views of the manager and is true at the time of writing and is subject to change without notice.

#### Fund only risk warning

73

Applications for shares of the funds can only be made on the basis of the current prospectus of the Record Umbrella Fund, an Irish-domicile, non UCITS Qualifying Investor Unit Trust, together with the latest audited annual report (and, if published, subsequent semi-annual report). Please read the prospectus carefully prior to investing. It is the responsibility of any persons in possession of this document and any persons wishing to make applications for shares pursuant to the prospectus to inform themselves of, and to observe, all applicable laws and regulations of any relevant jurisdictions. In certain jurisdictions, shares may not be available, publicly and/or otherwise, for purchase and the distribution of this document may be restricted.

#### **Performance warnings**

Past performance is not a guarantee of future results. Portfolio returns are gross of fees and assume the reinvestment of all returns. The investment return and principal value of an investment will fluctuate so that when realised, may be worth more or less than the original investment.

This presentation shows portfolio returns on an unleveraged basis. Any increase of the gearing ratio will lead to greater volatility of the investment and potentially greater losses.

Investors with significant leverage must be aware of the risk involved in the investment proposed and of the fact inherent in such investments is the potential to lose all of the sum invested.

The absolute return product often will have high levels of exposure, up to 50% of the total commitment (long or short position), to a single currency therefore investors must be aware that significant losses may be realised in a short period of time due to sudden changes in relative currency values. Changes in rates of exchange between currencies will cause the value of investments to decrease or increase.

The views contained herein are as of 27-May-2009 and may have changed since that time.

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# Shetland Islands Pension Fund

Pages 2-21

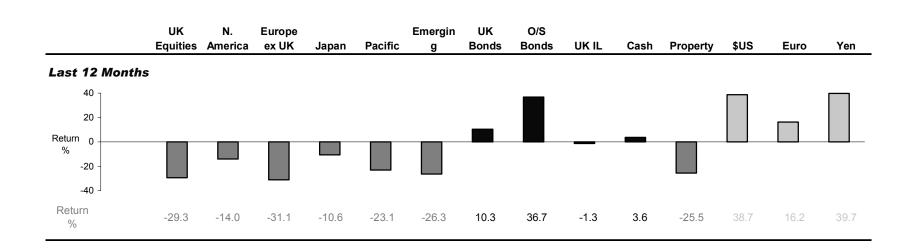
# Shetland Islands Council Capital and Miscellaneous Funds

Pages 23-51

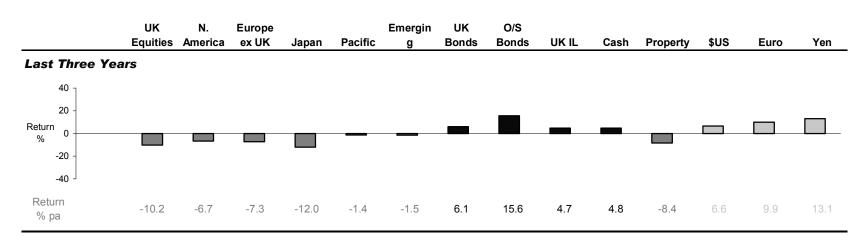
Date: May 27<sup>th</sup> 2009 By: Karen Thrumble

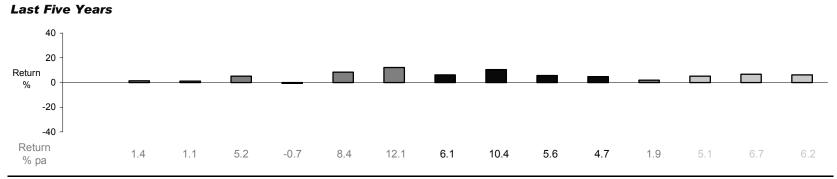
SECTION 1 Market Background

# Year to March 2009



# Longer Term







# Shetland Islands Council Pension Fund

SECTION 2 Total Pension Fund Performance

# **Fund Structure And Value**

Fund Value								
Values (GBP)'000	Value at 31/03/2008	% Fund	Value at 31/03/2009	% Fund				
CAPITAL INTL	173,784	93						
BGI			135,803	92				
SCHRODERS	10,181	5	9,134	6				
RECORD	3,294	2	2,354	2				
Total Fund	187,258	100	147,291	100				

# **Fund Benchmarks**

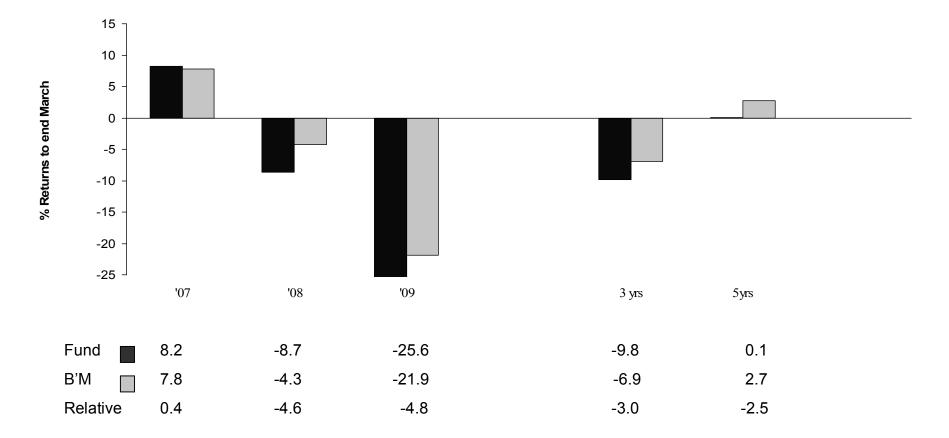
	BGI	Schroders	Record	Total	Index
Total Equity	85.8			75.0	
UK Equities	42.9			37.5	FTSE All Share
North America	9.9			8.7	MSCI North America
Europe ex UK	14.0			12.2	MSCI Europe ex UK
Japan	9.5			8.3	MSCI Japan
Pacific ex Japan	9.5			8.3	MSCI Pacific ex Japan
Total Bonds	10.0			8.8	
UK Bonds	5.0			4.4	FTSE Gilts All Stocks
Corporate Bonds	5.0			4.4	iBoxx £ non Gilts Index
Cash	4.2			3.7	LIBID 7 Day
Total Alternatives		100.0	100.0	12.5	
Property		100.0		10.0	IPD Pooled Property
Currency			100.0	2.5	1 Month LIBOR -0.1%
% of Total Fund B'M	87.5	10.0	2.5	100.0	

### **PERFORMANCE — LATEST YEAR**

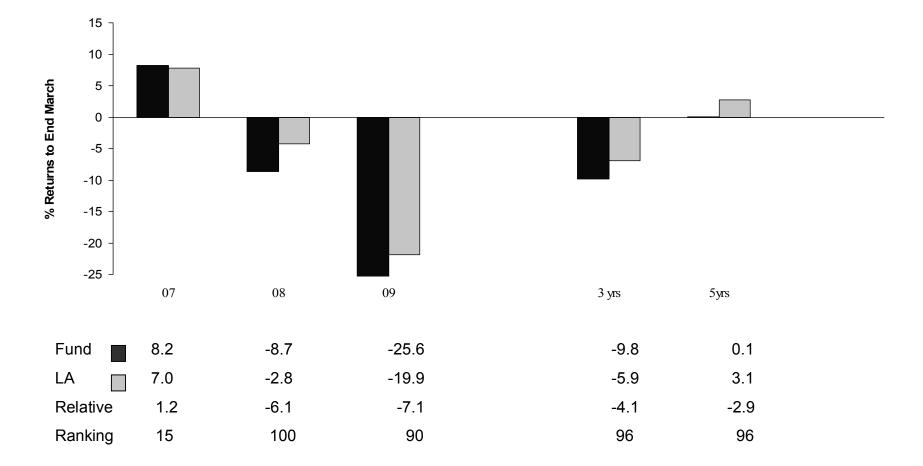
Fund	-25.6	
Benchmark	-21.9	
Underperformance		-4.8
Manager contribution		-4.4
Asset allocation		-0.4

	Asset A	llocation			Manag	ger Contrik	oution
% V	alue					% Re	turn
Start	End						
Year	Year	B'M	Impact		Impact	Manager	B'M
93.0		87.5	-0.6	Capital Intl	-5.0	-26.7	-20.7
	92.0	07.5	-0.0	BGI	0.0	-9.0	-9.1
5.0	6.0	10.0	0.3	Schroders	1.2	-9.6	-27.1
2.0	2.0	2.5	-0.2	Record Currency Mgmt	-0.6	-28.5	4.1
			-0.4		-4.4		

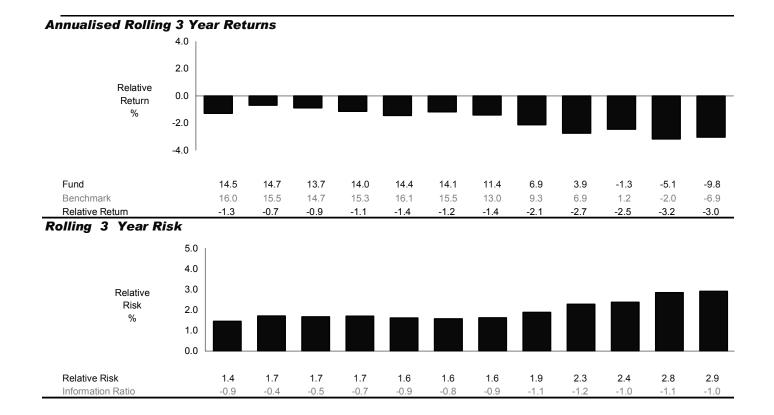
# **Total Fund vs Benchmark Returns**



# **Total Fund vs Local Authority Funds**



# Long Term Risk and Return



# **Key Points**

### Latest Year

- > The return of -25.6% was the worst the Fund has suffered since measurement began in 1981. This was driven by the fall in equity markets over the period.
- > Performance relative to benchmark was poor. This was primarily due to the poor return achieved by Capital International who were dispensed with in the fourth quarter of 2008.
- > The move of the multi asset portfolio to BGI will result in the Fund performance being far closer to benchmark and will reduce the overall level of risk taken.

#### Longer Term

> The Fund is well behind its own benchmark over both the three and five years. This is mainly due to the poor recent performance of Capital International although Record Currency Management have also detracted from performance, losing over £2.5 million since they began management in 2007.

SECTION 3 BGI Multi Asset Portfolio Performance

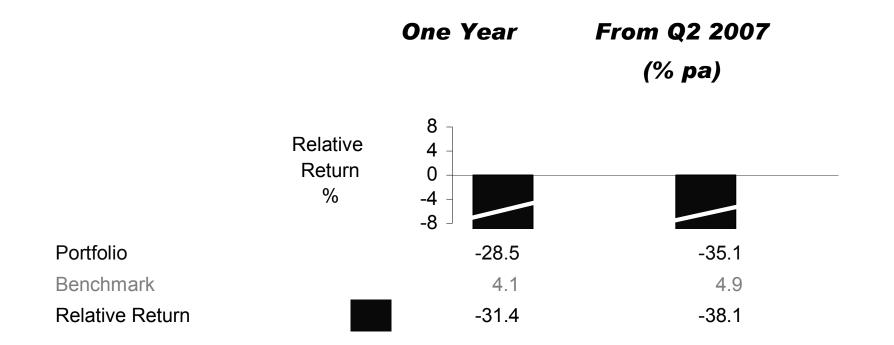
# **Key Points**

#### BGI was appointed from December 2008 on a multi asset passive basis.

> In the first full quarter of management BGI returned -9.0%. This was in line with benchmark as would be expected from an index –tracking manager.

SECTION 4 Record Currency Management Active Currency Portfolio Performance

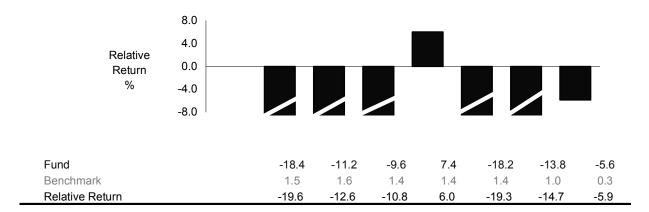
## Performance



# **Quarterly Performance**

						2009		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Values (GBPm's)								
Initial	0.0	5.0	4.1	3.6	3.3	3.5	2.9	2.5
Capital Gain/Loss	0.0	-0.9	-0.5	-0.4	0.2	-0.6	-0.4	-0.1
Final	5.0	4.1	3.6	3.3	3.5	2.9	2.5	2.4
Proportion Of Total Fund								
(%)	2	2	2	2	2	2	2	2

**Quarterly Returns** 



# **Key Points**

#### Latest Year

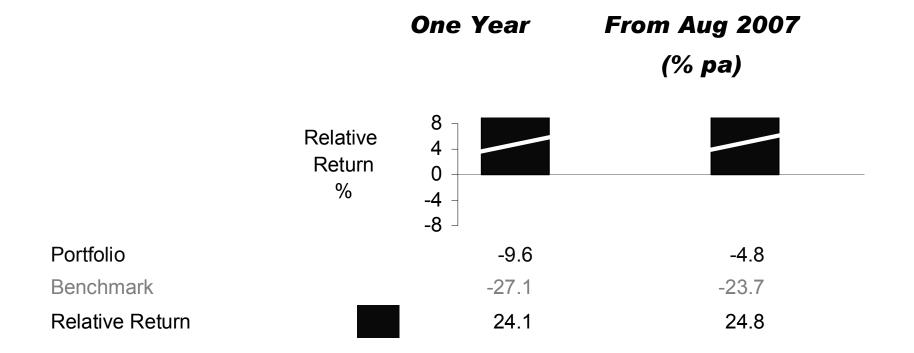
- > In the latest year the portfolio has fallen in value from £3.3m to £2.4m with a return of -28.5%.
- > This return was 31.4% below the benchmark.
- > The benchmark may need reviewed to incorporate the added value target that is expected from this asset class.

#### Longer Term

- In the seven full quarters that the portfolio has been in operation it has halved in value from £5m to £2.4m with a return of -31.5%pa.
- > Although disappointing this is not inconsistent with the experience of other funds where the average return from this asset type has been -23% pa.

SECTION 5 Schroder Investment Management Property Portfolio Performance

## Performance



# **Key Points**

### Latest Year

- > In the latest year the portfolio return of -9.6% outperformed the benchmark by a massive 24%.
- > The UK property assets held by the portfolio underperformed the IPD index, returning -32.4%. However the portfolio benefited from strong returns from its overseas investments - the return of 11.6% buoyed by the strength of the Euro.
- > The portfolio benefited further from retaining up to 20% of the assets as cash.

#### Longer Term

> Since August 2007 the portfolio has returned -4.8%, well ahead of benchmark.

# Shetland Islands Council Capital and Miscellaneous Funds

SECTION 6 Baillie Gifford Capital Fund Performance

# **Portfolio Benchmark and Target**

#### Benchmark

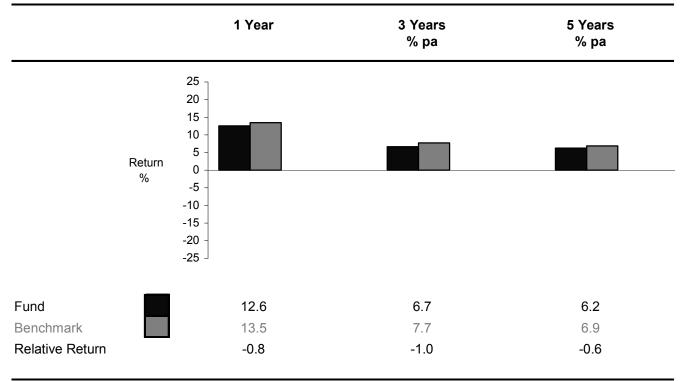
> The performance of Baillie Gifford is measured against a customised Benchmark compromised 90% of the FT-A 5-15 year UK Gilt index and 10% of the Cash index (LIBID).

#### Target

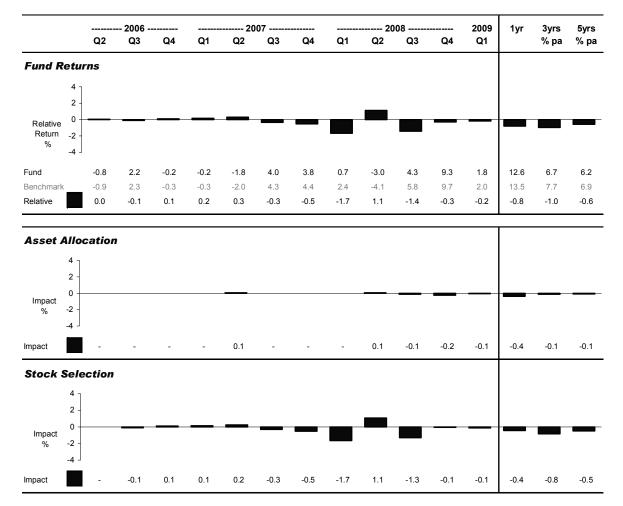
> The target of the portfolio is to outperform the benchmark by 0.3% pa over five year periods.

# Performance

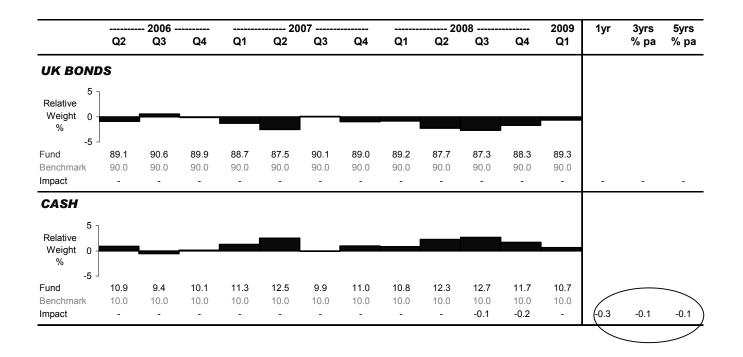
**Fund Returns** 



## **Attribution Analysis**



## **Asset Allocation**



## **Selection**

	2006				20	07		2008				2009	2009 1yr	3yrs	5yrs
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		% pa	% pa
	)S														
Relative 2															
Return 0 -								_						_	
% -2 -															
_4 ┘ Fund	-1.1	2.3	-0.3	-0.3	-2.2	4.3	4.2	0.6	-3.6	4.7	10.5	2.0	13.8	6.9	6.4
Benchmark	-1.1	2.4	-0.5	-0.5	-2.4	4.6	4.7	2.6	-4.7	6.3	10.6	2.2	14.6	8.0	7.1
Impact	-	-0.1	0.1	0.1	0.2	-0.3	-0.5	-1.7	1.0	-1.3	-0.1	-0.1 (	-0.5	-0.9	-0.5
CASH													$\backslash$		$\nearrow$
4 -															
Relative 2 -															
Return 0 - % -2 -		—	—	—	—					—		—		—	
-4															
Fund	1.1	1.2	1.3	1.3	1.4	1.5	1.0	1.4	1.4	1.4	1.1	0.3	4.4	4.9	5.0
Benchmark	1.1	1.2	1.2	1.3	1.4	1.5	1.5	1.3	1.3	1.3	0.8	0.2	3.6	4.8	4.7
Impact	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-

# **Key Points**

### Latest Year

- > In the latest year the fund return of 12.6% was below the benchmark of 13.5%.
- > This was due to a combination of holding more than the benchmark weighting in cash and relatively poor bond stock selection since Q3 2008.

### Longer Term

- > Over the last three years the portfolio returned 6.7% pa, underperforming by 1.0% pa.
- > Over the last five years the portfolio has underperformed by 0.6% pa. This means that performance is 0.9% pa below the added value target that was set.
- >
- > Over both these periods the reason for underperformance was relatively poor bond selection.

SECTION 7 Baillie Gifford Miscellaneous Fund Performance

# **Benchmark and Target**

### Benchmark

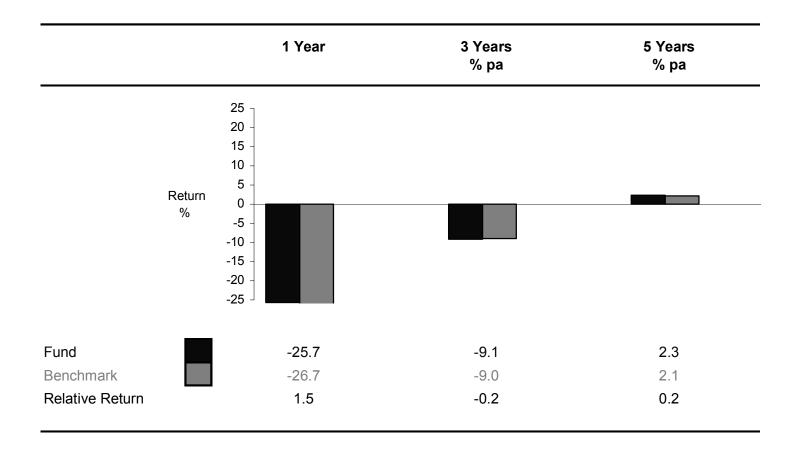
> Baillie Gifford's performance is measured against a customised Benchmark:

	Weighting (%)	Benchmark
UK Equities	75.0	FTSE All Share
Overseas Equities	23.0	
North America	6.325	FTSE North America
Europe	6.325	FTSE Europe ex UK
Total Far East	9.2	FTSE AW Dev Asia Pacific inc Japan
Emerging Markets	1.15	IFC Investable
Cash	2.0	LIBID 7 Day

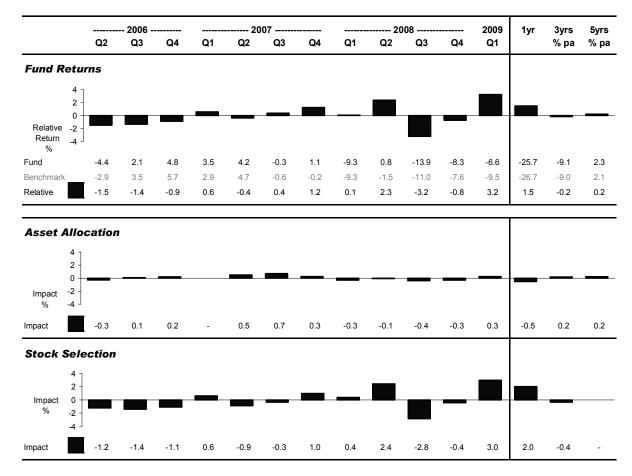
### Target

> The target of the Fund is to outperform the benchmark by 1.5% pa over five year periods.

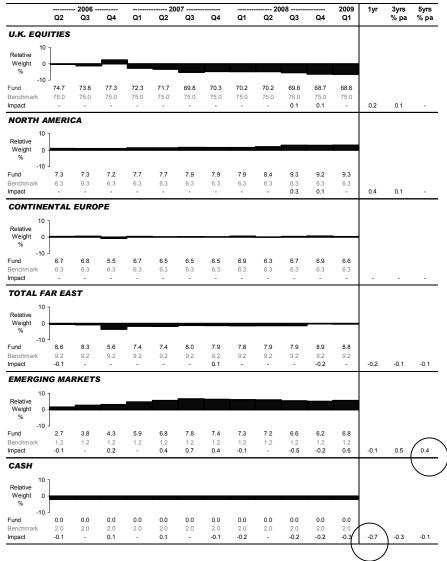
## Performance



## **Attribution Analysis**

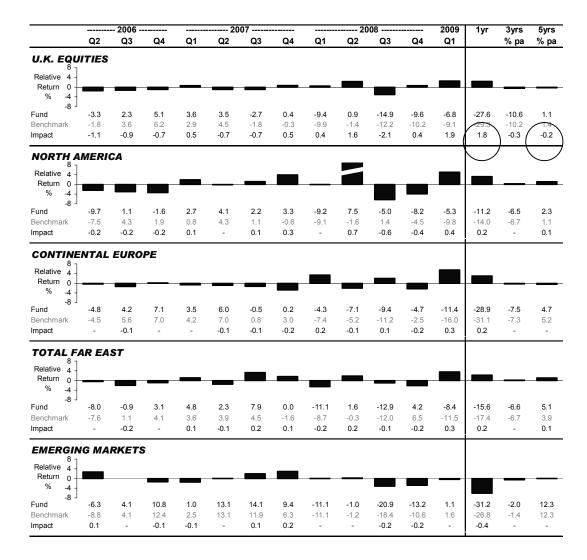


### **Asset Allocation**



35

### **Stock Selection**



## **Key Points**

#### Latest Year

- > In the latest year the portfolio return of -25.7% was 1.5% above the benchmark.
- > This was due to good stock selection across all the developed markets, in particular within the UK.
- > Asset allocation had a negative impact, the portfolio suffering from holding no cash.

#### Longer Term

- > Over the last three years the portfolio returned -9.1% pa, underperforming by 0.2% pa.
- > Over the last five years the portfolio has outperformed by 0.2% pa with a return of 2.3% pa. Over this period performance was 1.3% pa below the added value target that was set.

### STATE STREET.

SECTION 8 Insight Miscellaneous Fund Performance

## **Benchmark and Target**

#### Benchmark

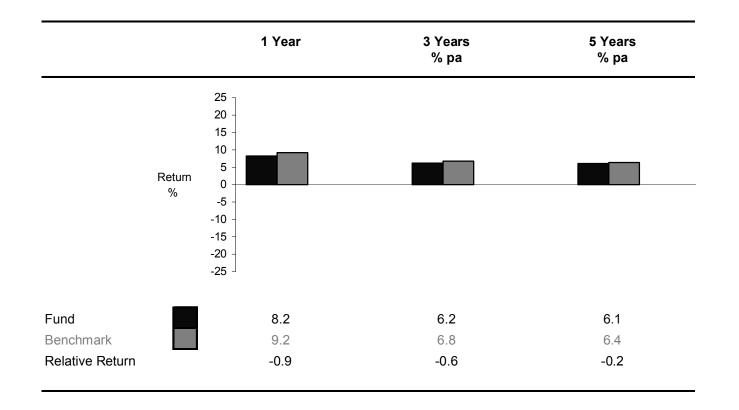
> Insight's performance is measured against a customised Benchmark:

	Weighting (%)	Benchmark		
UK Bonds	60.0	FT-A 5-15 Year Gilts		
UK Index Linked	20.0	FT-A Index Linked All Stocks		
Cash	20.0	LIBID 7 Day		

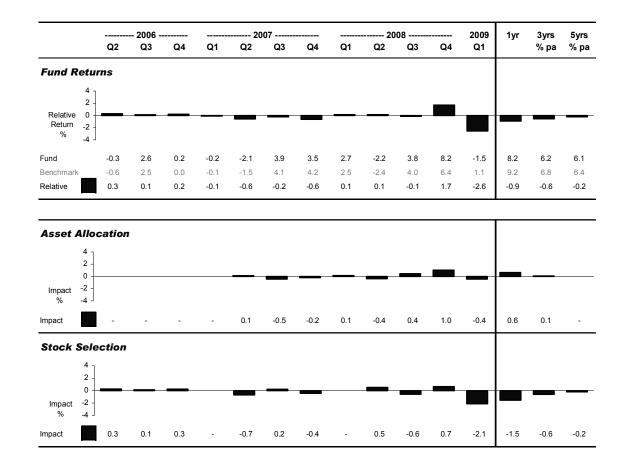
#### Target

> The target of the portfolio is to outperform the benchmark by 0.5% pa over five year periods.

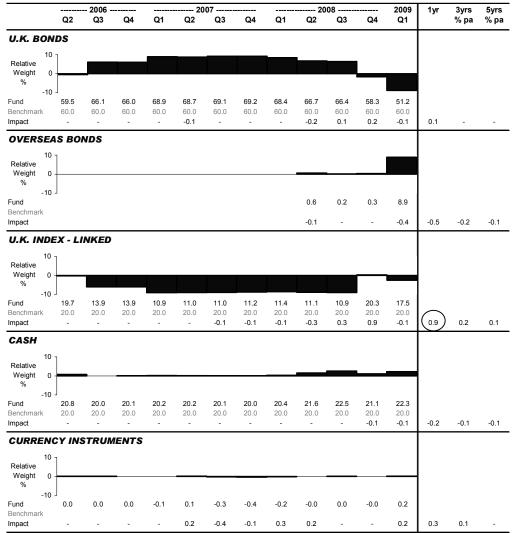
### Performance



### **Attribution Analysis**

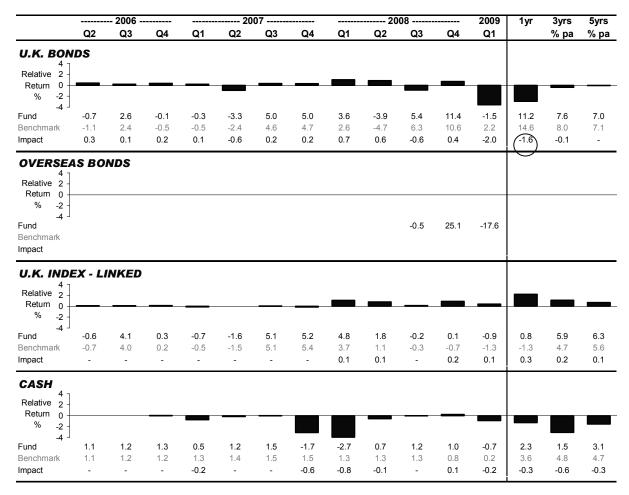


### **Asset Allocation**



42

### **Stock Selection**



## **Key Points**

#### Latest Year

- > In the latest year the portfolio return of 8.2% was 0.9% below the benchmark.
- > The key reason for the underperformance was the UK Bond selection. The UK Government bonds underperformed the benchmark index and the portfolio suffered further from the decision to invest in corporate bonds during the year.
- > Asset allocation had a positive impact, particularly underweighting Index Linked gilts.

#### Longer Term

- > Over the last three years the portfolio returned 6.2% pa, underperforming by 0.6% pa.
- > Over the last five years the portfolio return of 6.1% pa was 0.2% pa below benchmark and 0.7% pa below the added value performance target.

### STATE STREET.

SECTION 9 GMO Miscellaneous Fund Performance

## **Benchmark and Target**

#### Benchmark

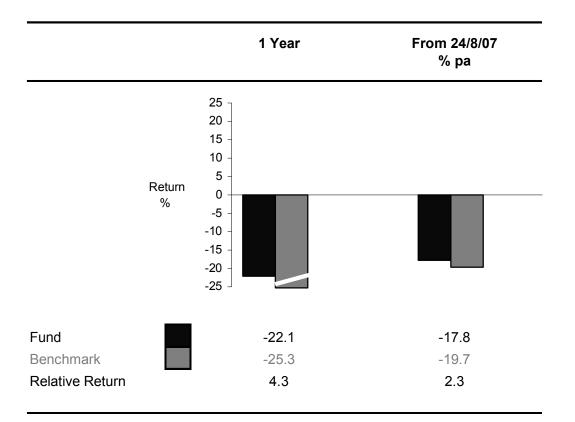
> The GMO performance is measured against a customised Benchmark:

	Weighting (%)	Benchmark		
UK Equities	60.0	FTSE All Share		
Overseas Equities	40.0	FTSE World ex UK		

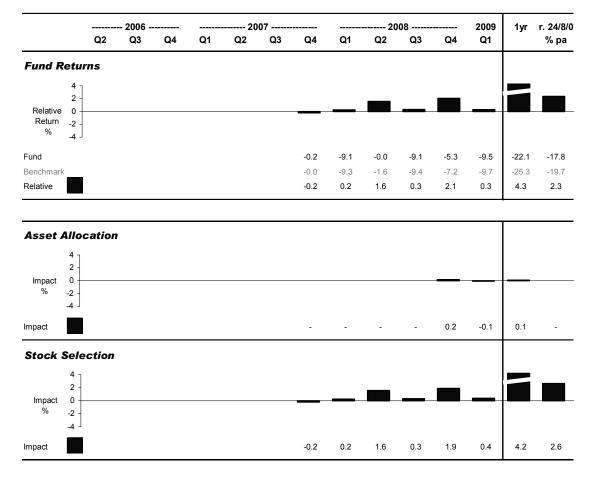
#### Target

> The target of the portfolio is to outperform the benchmark by 1.0% pa over five year periods.

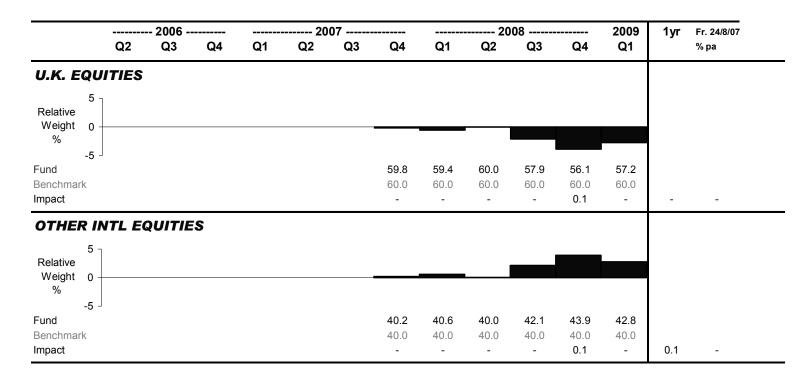
### Performance



### **Attribution Analysis**



### **Asset Allocation**



### **Stock Selection**

	2006			2007			2008			2009	1yr Fr. 24/8/07			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		% pa
J.K. EQU	ITIES													
4 7	_													
Relative 2 -														
Return 0 - % -2 -														
_4 ┘ und							-0.1	-9.7	0.9	-12.3	-8.2	-7.6	-25.0	
enchmark							-0.3	-9.9	-1.4	-12.2	-10.2	-9.1	-29.3	
npact							0.2	0.1	1.4	-0.1	1.3	0.9	3.6	2.3
OTHER II 4 Relative 2 Return 0 % -2	NTL EO	QUITIE	ËS											
und _4 」							-0.5	-8.2	-1.4	-4.3	-1.3	-11.8	-17.9	
enchmark							0.4	-8.5	-1.8	-5.2	-2.7	-10.7	-19.1	
npact							-0.4	0.1	0.2	0.4	0.6	-0.6	0.6	-

## **Key Points**

#### Latest Year

- > In the latest year the portfolio return of -22.1% was 4.3% above benchmark.
- > The key reason for the strong relative return was excellent UK equity selection backed by good selection within overseas equities.
- > Asset allocation had a neutral impact over the period

#### Longer Term

- > Over the period from inception the portfolio returned -17.8% pa, outperforming by 2.3% pa.
- > The outperformance was entirely due to the strong UK equity selection in all bar one quarter.

### Appendix

## **Relative Performance**

- > Q. Why are the relative return numbers in the report not simply the arithmetic difference between the fund and the benchmark?
- > A. Whilst the 'arithmetic' difference adequately describes the relationship between a fund and benchmark, it is unsuitable for the construction of time series, quantifying growth in value or for inter-fund comparison.
- > Whilst intuitively unappealing, a 'geometric' calculation overcomes these factors because it recognises the compounding effect of returns.
- > This is best illustrated working through an example

### An Example

A fund returns 7% each quarter, and the corresponding benchmark 5%. Clearly the fund is 2% different (better) than benchmark each quarter and intuitively, 8% over the year, as below;

	Q1	Q2	Q3	Q4	Year
Portfolio	7.0	7.0	7.0	7.0	28.0
Benchmark	5.0	5.0	5.0	5.0	20.0
Difference	2.0	2.0	2.0	2.0	8.0

Applying these to a portfolio valued at £100 gives us;

	Value	Q1	Q2	Q3	Q4
Portfolio	100.0	107.0	114.5	122.5	131.1
Benchmark	100.0	105.0	110.3	115.8	121.6
% Diff'					7.8%

The compounding effect means that the difference in value isn't 8%, but 7.8%.

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 $YA \square \square + \ddot{a} \square \dot{u}Cb(\square S \ddagger R_i, \square \dot{Q}d?r$ □9<\A&'GÈ " $rQ \square \Box \phi ah \square \check{s} \langle \hat{E}\tilde{N} \square \Box iE \ddagger \tilde{N} ]$ èaô  $4z \square Bg D \times \square A - a E \square H$  $\langle \Box *B = ; \langle 0HOIO^{p} p T D OMxJ \rangle$  $\Box$ ùD $\Box$ 1,,~D, VD>‰1⁄2Ä-ÄDÄãÄKÄ»ÄYD‰ dEò"E DÒI2' DÔEÚBÚGúŒt<sup>тм</sup>4 MzN¦' DÈþä Dr!YKî  $\Box' \div \Box?\% \&B\#; c^{\circ}(\mathbb{R}'')J:EAi \square \hat{O}Q$  $\pi(\mathbf{C}(\Box) \dot{\mathbf{C}}'' \mathbf{U} \mathbf{T} \mathbf{C} \mathbf{I} \Box \Box \Box \mathbf{D} \sqcup \mathbf{U}' \dot{\mathbf{C}} \mathbf{I} \dot{\mathbf{C}}$ 

• • · · · · · · ·  $\Box G$ ", $\hat{e} \Box \Box \}$ çïé/ $\div \Box \tilde{n}_{i} \Box \dot{A} \Box H \Box h$ 8  $\square$ ðm W 2p[àŸf,AiA«,N $\square$ ý#8\$  $X \square \frac{1}{4}$ ?øA^KHIÈ{ $!7\ddot{A} < q^{\dagger}, W\ddot{u}y(!$ 46'-ôãĐ 🗆 aÁa†° fa 🗆 🗆 †W†ï  $iiia ^{\circ} (a)^{\circ} (a)^{1} \dot{I} \dot{A} \dot{Y} \square \S \square Y \ddot{A} \ddot{Z}^{2} \dot{E} H,^{2}$ \$òýÈÉ(Ç(YÔhÔ7ÑÎÑŠè□Ñ÷b< b\*böÅ<Žõ<ÕÇ~□ûL□&Y&9□‡ Ä%ÆuÇMÄsâsã‡ã¿NpJP%ìM~I □JlN<žDHJIÚ□tCj'•KwKg'C'  $--\%\ddot{Y}N_{i}\&d\&\Box\&|``\hat{e}^{TMa}O=-$ 

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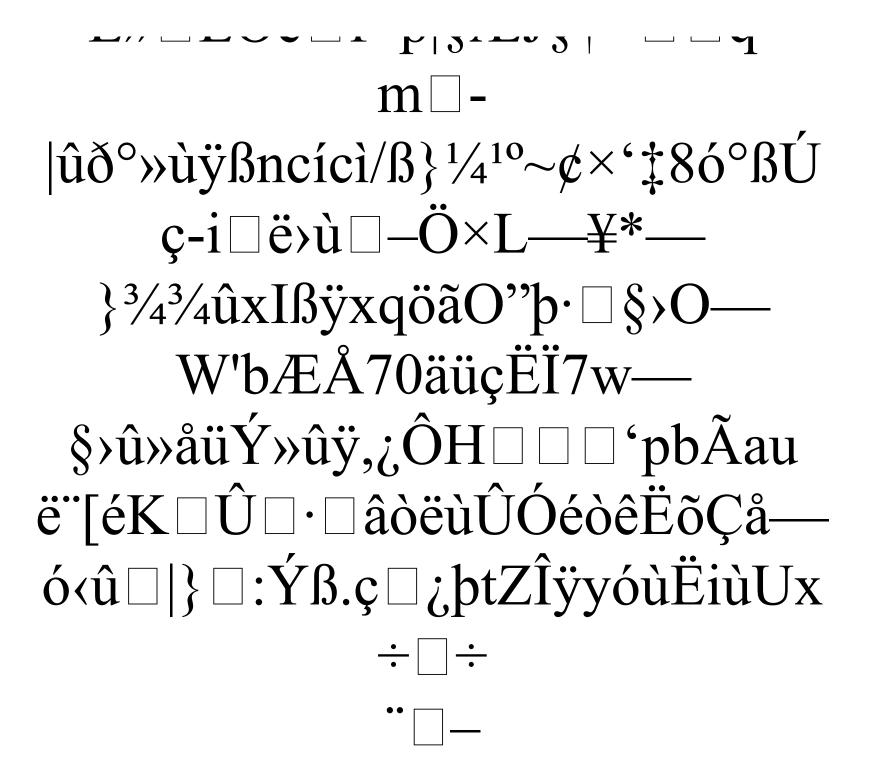
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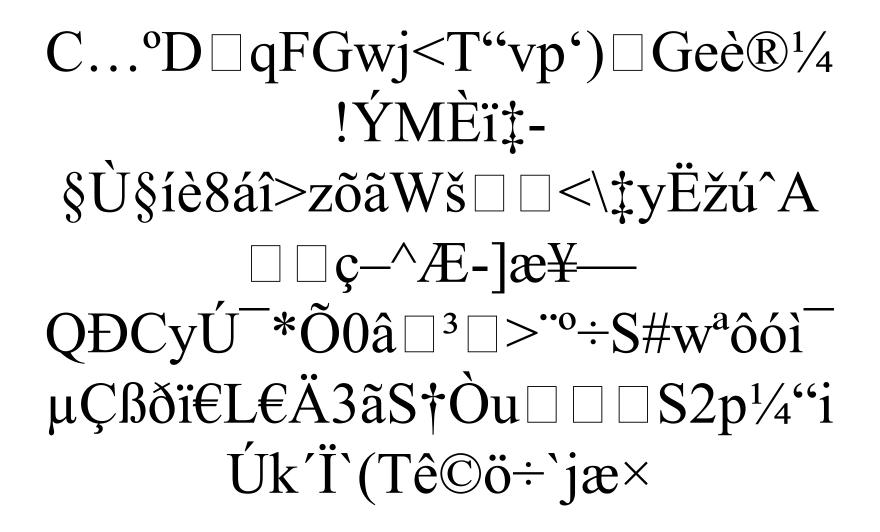
']b¶{·U□ãzZïI& ølzSs□-OO£□ RuÍ1□Y Fê5µÛ(□ÕäsæOo®/'□ ±œlQ³O;dS[Ò'è– □□5€jrh~aÉè‡i\*¦£`¹± □□,‰□Ã  $NE\cdot i+\neg^{1}Q \Box \Box X \sigma \ddot{u} A q \ddot{o} \#\%$ "•+sy□□áK¶WÒòÖeÎóÛ— Œ4Én 🗆 🗆 Xc1Dùí  $\ddot{I}\dot{U} \supseteq \langle \Box \hat{E}\ddot{I} \Box \Box \hat{D} \rangle \dot{U}\ddot{E}^{\prime}$ qui!ò  $8s \gg # \acute{O} \square B \ll \acute{O} \%_0^{TM}$  $B^{1/2} \square \dot{I}^{1/4} \# x \ddot{O} DT E \square \mu \square B \ddot{a} E P \square$  $]m \square \times \tilde{o}u \dot{A} \square \hat{e} \tilde{O} \square f^{o'} O \square W > 0N$  $\Box, 4\neg \tilde{N}l\hat{i}q \Box 4^{3}\%s > 6'LA \emptyset \Box \hat{O}\hat{o}\bullet \check{z} \ll$  $\Box \Box \acute{a}`\hat{A} \Box UAd \Box \Box d\tilde{N}\hat{O}\tilde{O} \Box "Es \Box "$ )}ݦFqáÕÅ

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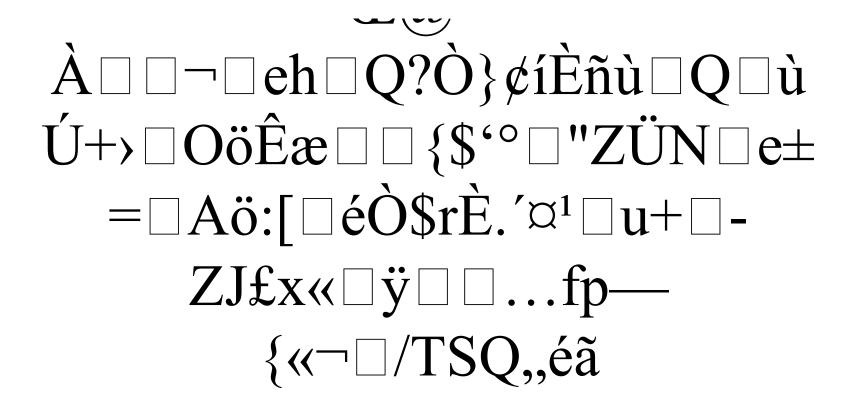
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š\* □"□àI•,üT""×M∢[–  $\Box \ddot{E}k\tilde{N}'K|\Box \Box o``BiEU' \Box k(z/\&'A)$ ½òFle2T©šñ£"ſñõÖ%ë"□·&□.ó ·Aä  $a D P z(a) [Zm \Box \bullet ] a \ddot{a} \delta \dot{U}$ o‡V÷]PCK □ uÞ²‰ÕÞYùãðp•æ ~`{~\*bĐÊ# $fL^2$ €□æa(□Ãó]|g  $2^{\mathrm{TM}}\check{\mathrm{Z}}$ -(a) —  $A1Q\dot{U}^{p} = 3 @q\& \square \square D: \square Å^{*}$ þ¦Du‰ï;ëÚD2¥#Ø□Ѐą¦Ëv□> 

 $.^{3}/_{4}D9^{\circ}8f_{1}z_{1}\phi_{y}^{3}\Box(\Box w_{5}H)$  $\Box j; f AQ C A K S c. \Box A j:$  $[\Box \acute{u}^{1/4} \ddot{U} \check{Z}^{2}] C \Box @-\grave{e} \Box^{1} \Box \not e P \Box ] - -$  $\Box \dot{C} \dagger \dot{O} F^{\circ} \dot{C} \Box \hat{E} = \not e f \Box \dagger = u M \Box (e^{3}/4)$ □#iÜ ÓŸ

 $\check{Z}$ | $\check{e}z$ §  $\Box$  2# $\hat{I}$ Á'a $\check{E}S$  $\ddot{O}$   $\Box$  =  $\Box$  opT  $\Box$   $\acute{e}v$  $\Box \ddot{\mathbf{Y}}, "\mathbf{b}"CW\acute{e} \Box \rightarrow a"" \gg \tilde{o} \Box a \} + b \Box I$  $\Box n^{a}u \Box VM^{-}\Box^{A}cHU[\ddot{e}\Box e\tilde{o}f a;3]$  $QH \emptyset \square HE$ ÓPÆjÞ□′î¨À%}žÒ»\*TÎÉžR  $a\%Y\check{s}^17\square\dot{O}$ , $\grave{a}I\square\hat{I}Gg\&'\div\ddot{O}$ 5è, $\hat{a}\mu \tilde{A}\ddot{e} \times t\hat{e}^2$  hh  $\Box W\ddot{a} \Box M\&Q \Box$ cY<ÙÔ¥n'ÊÙ¹Å^®tÑj, <sup>3</sup>3 □ ò Ö ó § ë k… j E l' □ Đ…- $N > \Box, \Box r7 å \delta \Box$ -----

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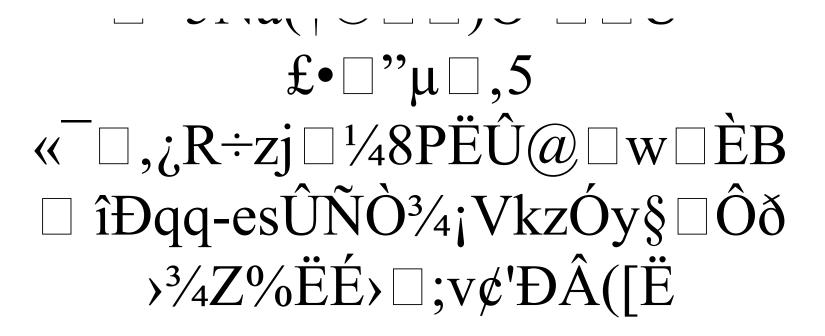
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#### $\rightarrow n = Iy \ddot{e}$ , $\bullet 0$ " $\dot{e} m \tilde{o}^{\uparrow} \square \square 3i \neq \square \square 9$ $\frac{1}{2}$ $\dot{E}b\dot{e} \square u \pm \dot{a}\dot{U} = 6EID$ $1\% 8*J^3 e^{1} D 1E_f^0 fYhBCb7\frac{1}{2}O$ $\Box \Box \mathbf{E}$ "",, $\hat{\mathbf{E}}i \Box \dot{\mathbf{O}} \Box h\hat{\mathbf{u}} \Box \Box \mathbf{x} \ddot{\mathbf{E}} \hat{\mathbf{B}} \mathbf{P} \dot{\mathbf{Y}}!$ Œ $\Box \neg h | B2 \} \Box \div \%^{a} \S q \Box \Box \Box \tilde{a} \tilde{A} \sigma \ddot{e} \ddot{E} X$ □‡XqEm□9QìÇ^)'n#□îB['Ä-°R"Ú□/|j<□°Ã¥□ß□¿²?KÕ÷À\$ $\square$ i( $\square$ NwøF/I

□.□d;>ĐæË□2o<ËŸÜžÏ[Ýáøþ°ì  $5K^{a}\Box^{1/2}, U^{a}(uXwPO<a(a)<<xA\BoxH$ ~ $(\dot{a}\dot{A}T\dot{u})^{1}$   $\dot{U}...C'$   $\dot{w}$   $\dot{a}$   $\geq$  21!W  $\square \# \square \dots Lç \square \ddot{A} \square 9 \ddot{U} \acute{a} \ddot{e}$  $^{1}{\acute{ev}, \Box \tilde{N}aY \Box \Box ob, \hat{O}} \# B \Box Aw}$ MK't $\frac{1}{2}$  h65WÁÆqoF©Đ  $t \Box \& \ddot{w} \ddot{O} \ll \tilde{n} \& \ddot{n} \& \Box N \Box cZ [ J D \phi x ]$  $\exists u = \dot{U} = \dot$ 7K±°-Cf(a) %É(t \$"†ÎkB&  $\check{z} \Box^{2"} \check{U} \hat{e} \hat{u} \hat{k} u' H \langle \langle \check{z} \Box \langle \check{Y} ] \Box J \Box \hat{U} \} C^{o}$ 

 $\times ifC \in jOj \Box o''b \sim H!\hat{u}^2 \Box O' \Box \Box '\pm$  $i\ddot{Y}$ žNaúpFI¢Hð<sup>2</sup>Á<sup>1</sup>  $\Box$  b  $\Box$   $\Box$  õ`  $\Box$  a\ñ`  $\Box R\hat{a}'\hat{A}u\hat{E}\delta x \notin \Box \#z$  $^{\circ}\Box - f\beta$ ; Ë-+×b,, äýão  $\Box \Box c \acute{u} \ddot{u} \Box \Box \ddot{v} \ddot{u} w \grave{o} (\acute{A})$ M· |ºÁü8wO>^  $c50' \Box M^{\sim} \Box; \ll \geq \exists i \gg 0$ ' $\square$  ·t\$ $\tilde{a}$   $\square$  «.  $\square$   $\mathcal{C}M \times \square b$ )<sup>3</sup>/<sub>4</sub> $\hat{a}B \square a$  Q  $\square$ å<sup>1</sup> DúÛoíÕ°)ÃŽÓCÆðÛ

 $w \emptyset g \Box < \pm Wz A \mathscr{R}: \dot{u} | \tilde{A}5^{\wedge} \Box \dot{E} / \tilde{N} \Box \sim @ \mathscr{R}$   $u a E9 \dot{a} \ddot{A} \ddot{U} = ^{TM} M \dot{e} \dot{Y} t \dot{a} W T C' \P^{\circ};$   $\Box \dot{y} \check{S}r \Box \hat{e} n \check{\partial} \mathscr{R} \_ I \dot{A} \check{S} i \ddot{e} \Box \dot{p} I \_ \Box Z N^{\circ} \hat{u} X - \dot{y} \Box \dot{o}, | x \S$ 

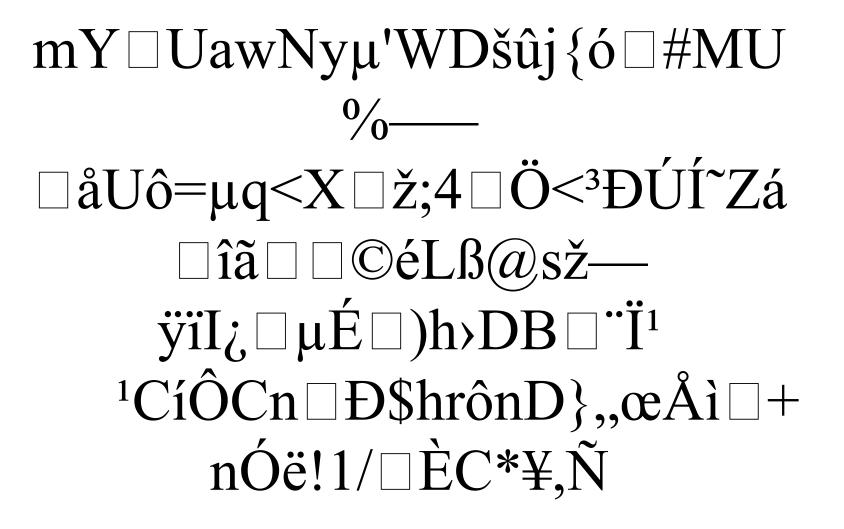


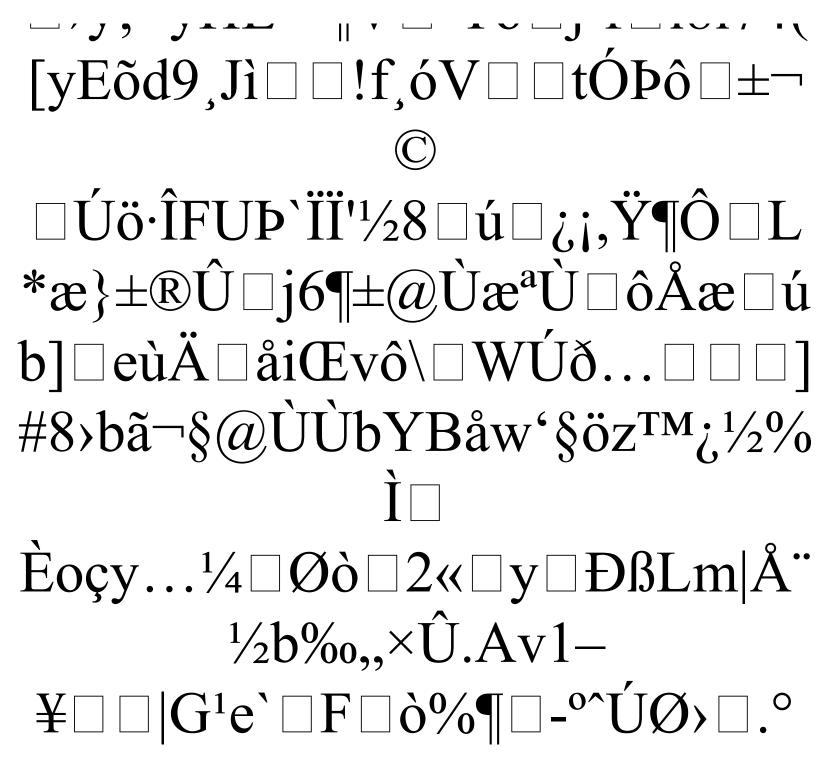
#### $t \Box \check{z}G @X \Box \Box \ddot{o} |\hat{A}\ddot{a}x`$ $\Box \hat{I},, \Box @\Box \Box g |^{a} \hat{U}r \ddot{I} \Box \hat{I}x \Box \dagger ULF €$ $\check{y}' \ddot{Y} \Box = \hat{I}i \Box \acute{e}1H\acute{o} \Box \exists i {;:y}$

ʪ¶¬□9f©ü<ßžîëG;¥1□rÆ;üá  $\Box 9 \square \mathbb{Z}^* \square \mathrm{SH} \grave{a} \square \ddot{O} . \square \textcircled{C} \square \mathrm{H}^{\mathrm{o}} \mathrm{T} \square \mathrm{N}$  $\Box(a\neg \Box N\Box \ddot{Y}\Box * `\Box \check{S}`\Box f]$  $\hat{E}YsC$ }  $\alpha$  i R1  $\Box$  cZDM?'Z CÃ  $\Box$   $\Box$  õ Á¦>¹fé)ô□IÝlt^□  $\Box$ PoZQ£• $\Box$ 9¿Úê $\Box$ á<ã¦  $\Box "O" \cdot \Box qv OBP \Box NÜA \Box \Box Q$  $\Box H \ddot{U} \Box (aN \div ... 5 \bullet 0] \Box \check{S} \flat \times \P \ddot{u} \Box \dot{a}$ μtyq 6□'<sup>a</sup>xÊç□af□éý«3gxkuÖ

## $\tilde{n} \mathbb{R} \tilde{k} \tilde{\partial} eN \tilde{s} \tilde{\zeta} \ddot{U} \square \mathbb{Q} ^{2} y''! \acute{e} \square u \square r$ $\hat{U} \tilde{J} \tilde{U} \tilde{l} \tilde{w} \text{-c.,} \square \square \ddot{Y} \ll \tilde{E} \cdot \tilde{O} \tilde{U} r \square \& \notin$

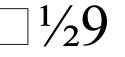
 $f_{i}U^{1}C \Box y \otimes 7f \circ \Box$  $\Box \ddagger \hat{o} \in \langle \Box \mu \Box \ddagger \tilde{o} + \Box \frac{1}{4}B\& \ddot{U} \Box \Box \neg \Box$ NÕ€AŽWñ,,Ü'éäÄÍ— (a) Už $E^{1/4}$  UtylXz<sup>a</sup>»ŠÚr'Á- $V > \Box \Box \cdot \Box \langle \tilde{A} o ; \Box \rangle \hat{U} O \dot{e} \dot{o} Y$ -;èu'='÷Œ KêÎÖõ $\square$  Dèe  $\square$  rrR  $\square$  {.".d î  $\ddot{\mathrm{E}}^{"}\hat{\mathrm{e}}\hat{\mathrm{o}}^{\mathsf{p}}(a)\ldots\beta\hat{\mathrm{A}}\mathrm{B}\ddot{\mathrm{I}}\}-\mathrm{T}^{"}\hat{\mathrm{E}};\hat{\mathrm{e}}\,\Box^{1}/_{4}\mathrm{o}^{*}(a)$ °¹";□4[úå□–  $\Box yi(a)L \Box \Box \Delta \mu K \oplus \delta \delta Z O \Box l(|?R)$ 





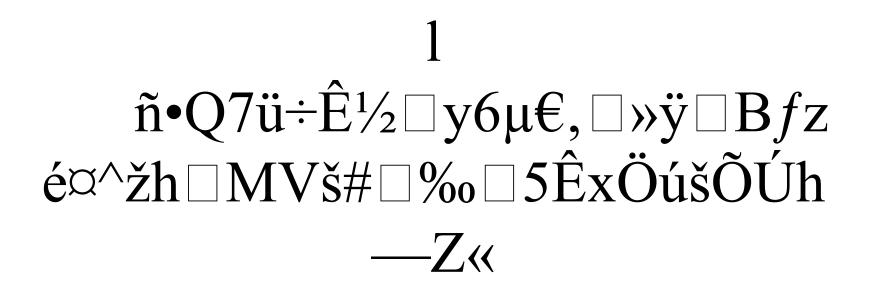
 $^{1}A90$ ֟qíuò  $\Box \Box \Box C$ •¥•µL}? $\Box^{2}\Box$ Åš,  $\Box \pm -g \hat{I} \hat{S} \hat{C} \hat{U}^{3} \Box \Box \Box \Box$  $X \tilde{o} x^{-2} \Box E \Box \ddot{E} U O E \hat{A} X o \Box E$ ú¢9i&M□"′B+ËÕ žÕ"XÚ€Æ□ Ýçvt  $\Box$  '  $\Box$  ÃZ6ÞZŽ–çç<sup>1</sup>/<sub>4</sub>4- $\tilde{N} \square a | \ddot{Y} \longrightarrow \hat{A}^{\circ} (\square \square 5F \square \ddot{a} \square m)$  $\Box^{3/4}\tilde{O}2\dot{A}''^{-}\Box\check{S}\ldots$ e $\Box\langle a \Box \ddot{u}^{1}G\hat{I} \not{c} \dot{c}$  $\dot{O}_{c} \square \square 9G'ic \acute{A}J^{\wedge}$ 

#### ŠÁ;c"ÆV 6ïE° $\Box = Nx \Box$ %oðÆ $\neg \Box$ %oÅaŒÝNbc<sup>1</sup>èµ



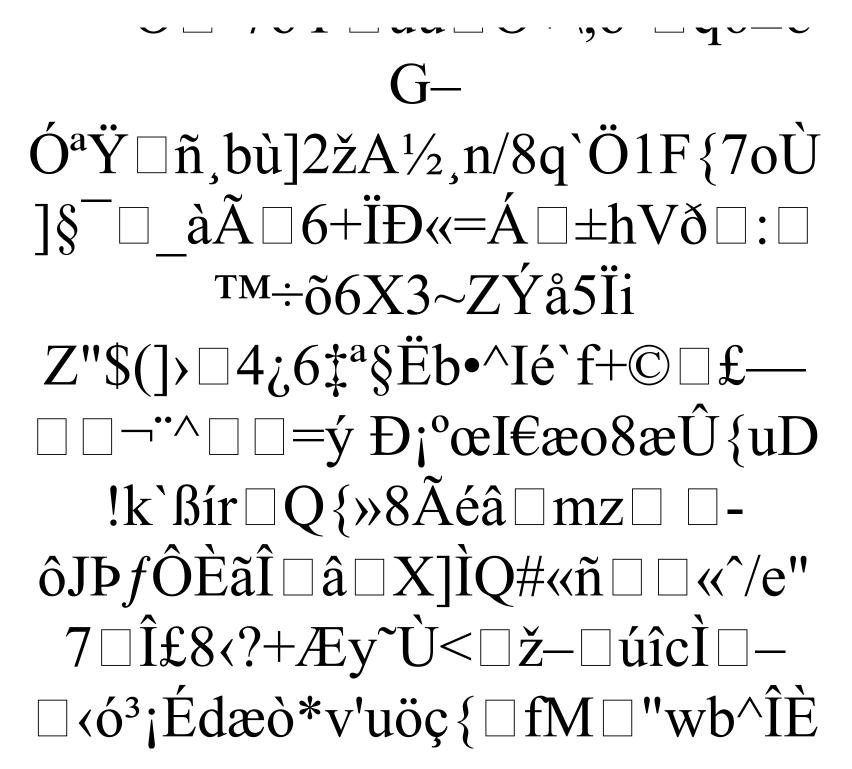
Z+:?Đâ  $\Box$  aIŠýC(a)<sup>1</sup> $\Box$ j9×· $\Box$ - $(7c\{\Box\ddot{o}; \mathbb{R}'tA^{\delta}: C6\Box^{\circ}7\dot{a}A^{\dagger}_{*}l^{2}, f\Box$  $\Box \not A \ddot{U} W 4 (a) p$  PrTp  $i^a \Box i \acute{e} \pm \Box \beta$  $\frac{1}{2}$   $\phi^{3}\phi'$  IX  $\square$  Åp%  $\square$   $\square$  N2^  $\square$ =Ó®žs\*£/Æ#,,Đ€ö'öb&B€Ä□□ç òvRÏ|~%'lØüêõ…□ç□í)^úýÈK>ã  $\frac{1}{4}$   $\square$  h  $\square$ r<sup>a</sup>×5;^,y•ÌpPWZHòvtsVqeA6aè¢ š¬ÙQ □<A=ý 

 $\Box$  }I\»p,  $\Box$  keu  $\Box$  Gj  $\Box$  t<sup>1</sup>/<sub>4</sub>uNáo  $\Box$  î  $\Box$  h  $\P O \circ \ddot{o} \Box q \cdot V7 \Box \ddot{o} \ddot{a} \Box \} \Box \ll \frac{1}{4} \Box \$ Bh9,$  $6 \Box J3''uOhÍS_{4'} \Box Mb^kBdE\ddot{Y},$ S9 $\Box$ (Y $\Box$ CÏà $\Box$ -WTHbb] $\neg$ {qó&tÞÝç□ý#ÿ™ïßþ□— 9 ç $\beta_i$ dTu+|é $\square$ > $\square$ E $\square$ ñcåênèÂ $\square$ ä FQÆ;  $X \square \tilde{N}\tilde{n}X \# \square 5 | V'Z \square \tilde{O}$ Æ€'B□UÕÒŠòb¤/£  $\neg \gamma \Box \Sigma_{\sim} \land ! \widetilde{\Omega} \mid ! \Box \mid 1 / \sim \Box$ 



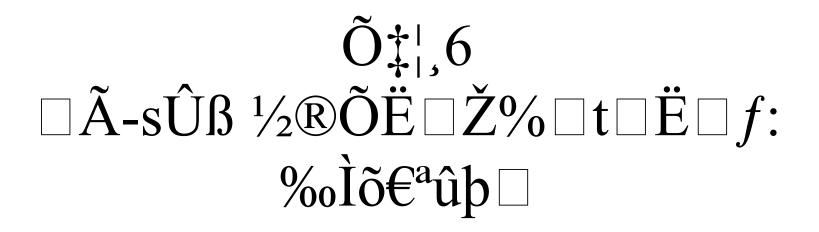
 $a^{1/2}$ ĐOÛnü 🗆 Gã5ökàbZÕùáßhLë  $\dot{U}G\dot{y}\Box \in \hat{o}$   $\exists :0\dot{a}\Box(\Box!\ddot{I}\ddot{a}\Box \div N7O)$ ÛXsßq^cXÜ€±ñ0b`à□8d3□!JÙê  $G^{f}{2\pounds o \ddot{u}^{1}}/{\hat{A} \times \mu O COGq^{o}}$ 66

 $AÝ \dot{0} \square^{a}qk = \gg q\hat{0}8y \square e\dot{A}\dot{u}$ **ZX**-Üp[c¬óÌÝ"Íp«5′Uœ~iéÊýçY¶□  $\tilde{N}$  ;, $\ddot{I}$   $\hat{A}$  gÅr $\ddot{I}$  {Y÷u<sup>TM</sup> $\dot{E}$ ID[^ú<sup>3</sup>D $\tilde{N}\tilde{O} = \hat{I}E \square \& \notin Y Å \emptyset Y / 4, E \square j$ 



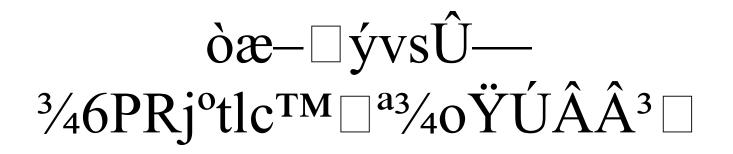
LAE  $\Box \dot{P} @ P"\dot{e} "U"., 4 \Box \Box ) \Box E,,$  $|^{2}|_{0}$   $\square$   $\square$   $\square$   $\stackrel{\circ}{\square}$   $b\dot{I}^{\circ}\neg iV \Box \tilde{a}[\dot{e}\hat{e}Y \Box \Box J \Box b \pm$  $\check{z}$ <sup>o</sup> $\Box$ <sup>Å</sup>(a)cA,, $\Box$  $\Box$ <sup>ãs</sup> $\Box$ <sup>Å</sup> $\dot{A}$ <sup>1</sup>/<sub>2</sub>k Á:<sup>1</sup>«  $f \Box a.K, \Box c \acute{Y} b L \neg \Box i \gg \beta \mu = \Box^{a'} \acute{u} \Box \dot{U}$ þwm□²âìÔ4dÅÙ©sW>□lpµ]□Ö =  $\& \sim \Box \Phi \phi \ddot{E}$ öÒj;οõ(,,

 $\int \frac{1}{4\hat{o}E} \square \square "c \square S \square c'e \square \P E -$ Ý3′ □ Ëñ □ Ô""~;ûÔ÷¤I–  $\tilde{U}$ :  $\dot{U}$ :  $\dot{E}$   $\dot{E}$   $\dot{E}$   $\dot{I}$   $\dot{C}$   $I^{a}$  { <  $\tilde{a}$  to  $\Box$  7  $\dot{I}$  t By T «  $\beta \Box Z a V, \Box (\hat{U} : \P G \hat{u} \hat{A} \tilde{a}, \Box -$ □ÔlâÁ/ö‡o)ZôZŒ!,k;™□õ□Đ  $\dot{Y}J\dot{Y}.q\mu^{a}\tilde{A}?^{-} > Mh't^{3}\Box\dot{A}\Box\dot{E}(\dot{u}=\beta)$  $p\ddot{O}a\dot{u}^3.V\P^{\prime}\Box D\Box\%f0\bullet Q,,\check{z}g\Box ^{*}_{*}Q^{2}_{P} \square$  §•x  $\square$ "~õÙû:õÁWH□□€ÆÓ¢·D(#¹ĐÊ &  $G_{0}^{i} = \tilde{O}_{0}^{i} = \tilde{O}_$ ··ͱϒ、ϲϥ;;ϲͻϫϒ;;;; 





 $m \Box \cdot JUAe, Dn [TMIA' \Box @] öjYnïM$ 7ZÖ(¥□JzF¨□§ÐJ  $RzW4\mW)d-\Box \Box 3H\Box D>A\Box$ m□<□€fmfO[Ò□Ê»□Fþ  $J\hat{U}^{\tilde{A}}E\tilde{N}\times \hat{u}m\rangle \Box w \Box \hat{I} \Box /)\hat{E}sG5\tilde{A}b \Box$  $\ddot{u}\dot{U}\dot{U}m\dot{b}$ % $\dot{v}\dot{w}\Box$ - $\ddot{I}\dot{e}^{\circ}AL\hat{A}\Box C(\Box \S)$  $T \square R\beta'' a E \hat{i}, \mu \hat{i} \square \square$ - $\dot{t}^{h} \pm \dot{OIp} \mathcal{O} \hat{E}(\mathcal{O} \hat{E}^2 \Box \hat{e} E; \Box X)$ "ùéæsÊ9 Ì $\Box$ 0Žï $\Box$ <\,,Çtù $\Box$ 1"Ú $\Box$ û  $\Box$ ;  $\hat{O}(\dagger \land \Box \times \hat{E}^{\frown} \Box | I \lt YL? \Box \hat{u} \cdot c \hat{I} \hat{s} 3 \ddot{o} 1$  $\hat{\mathbf{T}}$ 



### hoÇ;Cà $\mathbb{R}$ Y1 5£ $\Box$ rI $\Box$ "; $\Box$ <sup>1</sup>/<sub>2</sub> $\flat$ 7EZ Hhæ (a) ú° Žh;> $\Box$ s" $\Box$ (qR~Þ\µDF;•ÿíé ...Îth/ $\Box \acute{ot} \Box ik \Box \acute{oot} AÇ1žø[PäØ2]$ ", $\Box qr$ " $G \Box F \Box f^a E = q(a)$ , $\Box ut^2 \Box \Box I$ $\textcircled{C} \ddagger \Box i - \Box O! \pounds \Box \Box O \dots \notin ! -$ )éW4QÒ $\Box$ $\Box$ ... $\bigcirc$ $\Box$ wt $\Box$ P $Q \square \gg \square \hat{o} 1 n \hat{a} H \square \times \hat{c} \hat{O} \hat{I} \hat{A} \hat{B} \hat{a} o Q T \square$ $^{\circ}\Box\Box @B4Tà$

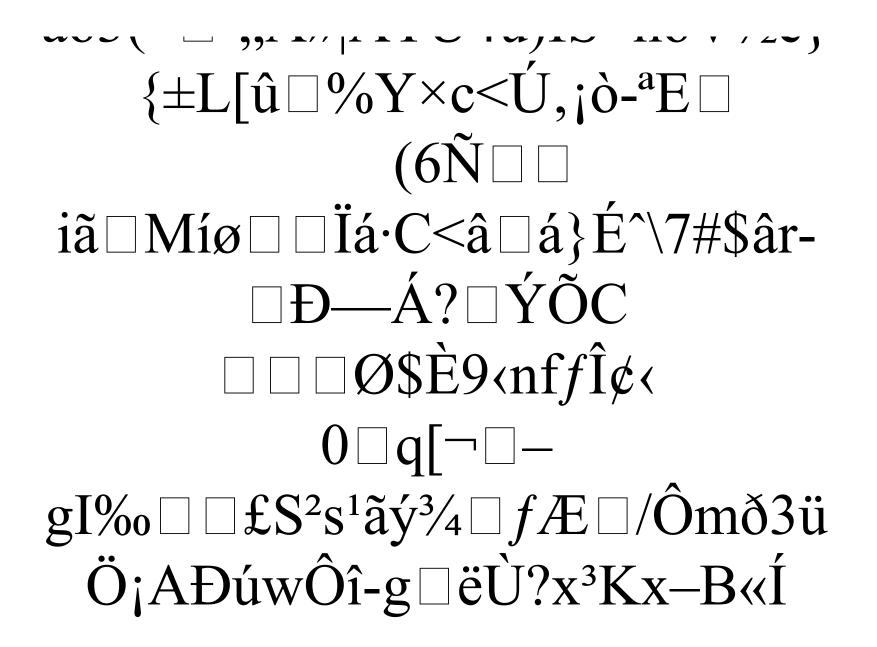
## \$,ÖãsËð<sup>2</sup>< \[]¶áY50"\_‡YÂOCø

Dc <sup>3</sup>/<sub>4</sub> -ýVN×öU–  $\tilde{N} \Box \Box Uo[\ddot{y} \Box \Box \dot{Y}; \circ h \dot{a}' f \dot{I}(\check{s} \ddot{o} v P \pounds c \Box)$ åТ′p□Ôz)ÐJ%R′Ð□\*тмgHÚ?Þ!  $HÍ \neg: \Box \hat{E}gk \Box \acute{e}R -$  $\square \Box \ddot{y}_{i} > 1 \acute{Y} O \acute{I} k_{2} \square \square \ddot{y}_{2} V \square \dot{U} h \square \Box E$  $QL \cdot \{\hat{O}V - \Box j \models \Box V \notin \Box j \neq -$ ,,^9T°8NÙ7′ï□wî,- $- \in l\mu \square \text{ Do \& } \square \text{ i + s < (i \& \mu] 90, d} T \mathbb{R}$  $\Box \Box \mu; \tilde{S}Ntá \Box \tilde{a} \Box \dot{c} \Box \hat{I} \in \dot{u} \Box Y \hat{a} \hat{I}$  $\Box \phi h < 30: \check{z} \Box \acute{y} \circ (a) 9 \Box \acute{U}(a) P \Box '6\&$  $\Box / \Box = T T 2 2 C 2 C 2 C X + C X$ 



# $\begin{array}{c} \widehat{E}^{"}u\widehat{E}^{"}]c^{\Box}u^{O} & \searrow V \square \square \widehat{U} \square \\ \widehat{E} & Auh_{i}^{\sim}\square + \widehat{o}_{i} \dots m \square i^{2} \langle W \square Y^{"} - D \\ \widehat{N} \square \widehat{o}l^{o}\widehat{1}^{\sim}\square + \widehat{\mathbb{R}} \end{array}$

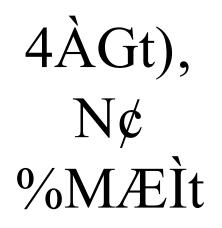
#### □š\$úu¾<sup>a</sup> O;šO□E¤UãëlÇ©¼□t YD ³ñÆå $\hat{u}$ €¬-′6±ãùÍ□nÚ;Đ&w°□]wê<sup>^</sup>@9˼ □3fÁî§□□□ná¼



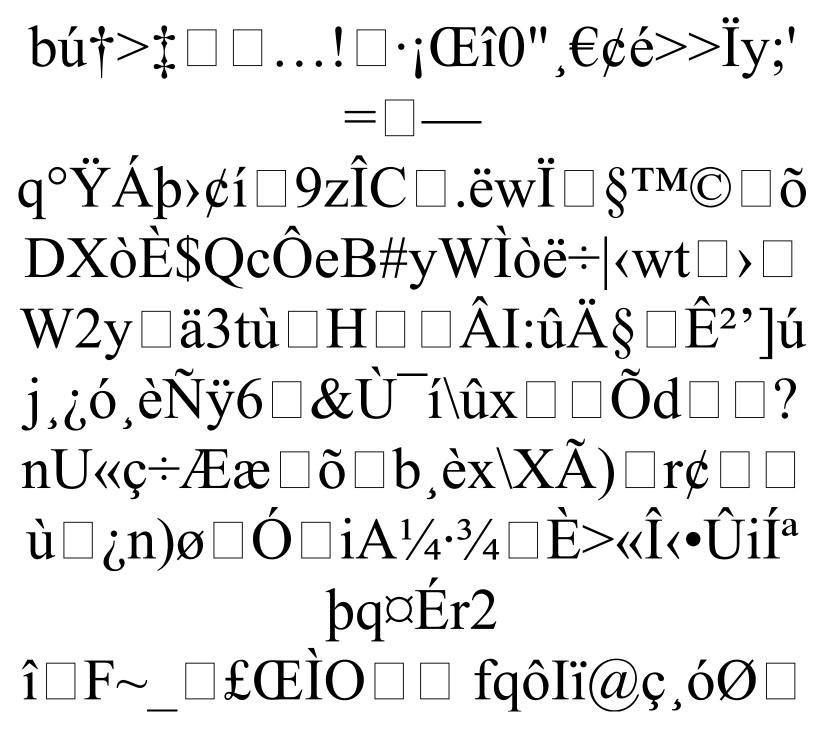
#### 0,,9C□ÏYây¤□Ò′¿ûõñŸH□w[ö $\Box \dot{a}^2 z' - N \Box \dot{e} K \Box \dot{i}$ îÀX□m¦□['‰êÚªÉïߊÿÝ%je"2ù -«+d;õŸ□½>□Ãþ□□à'€□äûŒû $\frac{1}{2}gR 3^{3} \dot{o}_{i} \neq \Box j \tilde{} BZ \Box b \Box$ $i \Box^{\circ} y \Box^{"} Z \Box^{TM} \Box ] E I * \Box Y 7 6, F'' \Box k \Box$

 $\check{Z}^{"}$   $\hat{Z}^{1/2}$   $\hat{a}F, \hat{o}Z^{-}$   $\hat{C}^{1/2}$   $\hat{N}\hat{O}S^{\circ}$  $\hat{u}^{\circ} \square \hat{I} = \hat{e}Z:\hat{O}\hat{O}Uk \square az \square \hat{E}g\hat{I} \square$ - $\tilde{n}^{3}t\check{Z}_{5}$   $(\dots #\dot{A} \in E\check{P}z \square \in \square \square \square \square )$  %  $\ddot{a}$ · · · · · Üc/H±GÉ \[\\_ÝÁ°Ž \[\\_åX·ÌRG#NæÍ :Ü 🗆 🖻 ¢Ô\~®%ÓÑ·#g~çN«kÊÚ  $\dot{c}\dot{b}\dot{a}h\Box\dot{o}^*)^{o}\Box Z^{*}_{*}I' < \dot{U}\dot{o}\ddot{o}v\tilde{s}_{}^{*}S\Box($  $e4\hat{u}:0SœH\div\ddot{y}\gg\Box'!e\$$ 

## Fx<sup>3</sup>;h°QÊ!Ý□"çÕf□□ZÖUNb<ä



 $9\Box(\Box)\Box o O \Box \in \&iåS \% j\& \$  $\ddot{U}\mu \notin \ddot{A} = *iND91 \ \square a`\neg$  $R^{3a}\hat{o} \Box \dot{A}^*B \div \tilde{i}, ]\Box hqun \ddot{Y} \Box \S$ o>Ë`û,òõñ; ¯ž5h□Í×Üaý~½  $\mathbf{E} \Box 4 \, \mathbf{\tilde{a}} f \Box 4 \mathbf{P} \ll 2 \Box \mathbf{Z} \cdot \mathbf{\acute{E}}$  $\ddot{O}B2;$   $\hat{N}^{1/4}(nQz\hat{o}1 \Box 4\pounds4)$ S~‰Ò#ĐÉP□mœÍi>nÇ"^šÂ□  $\tilde{z}$ £ší ( $\Box ZJ$ àVB3ä $\Box$ ‰Z\$gmh0 $\Box$ ìt k1>Êi□å.. Ö»µU2õQÏî4Ô<sup>3</sup>»™C<sup>1</sup>VÒÀ}Óž

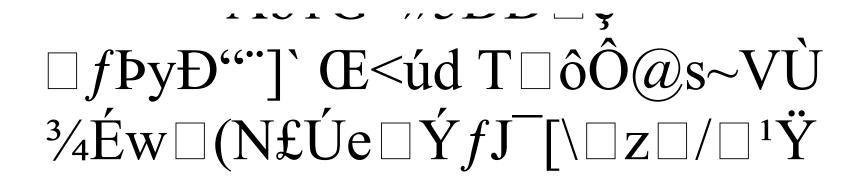


 $\Box vU \setminus y \Box a^{1a}A \neq I$ — ^V7T^¢w9≪IQ□ÍÏÁÊ¥ÜÏKT¹+Pá yÎ□ôÞQcÃC<⁰Ø3P-§ŽèÂ,,'•□°□  $< P+\p} \hat{E}\tilde{o}^{1}/_{4}X \to \square \times p; P^{a}f\hat{i}\in q\tilde{N}Y$ KQ $\tilde{a}$   $\tilde{i}$   $\tilde{E} \square 6'1$  / PM°T;^  $\ddot{u}$   $\hat{a} \square$  —  $3qwU"\tilde{O}^{o}U \square^{2}\dot{u}4\dot{u}\hat{i} \square \ddot{O}l([l_{a}]Xn \times$  $\Box \acute{o} \dot{O} dJ (a) T \bullet \{ \Box \tilde{n} \acute{o} A2\dot{E}6q \square \square Z\hat{e} \square \emptyset \phi \check{s}pY^1 Fv; fTi/\tilde{N}$  $\Box EyN$ —  $\Box \ddot{A} \Box - M \ddagger 2O \ddot{E} \dot{A} \Box :, \Box \frac{3}{4} R \dot{i} \Box$ 

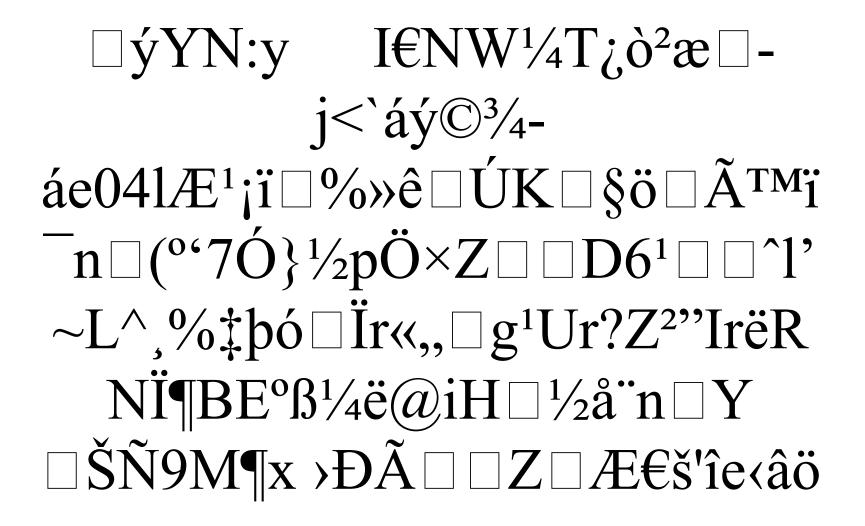
i'' $\tilde{n} \square aZkOtg \square \tilde{a} - - a \square^2 iU \square$ mÚG© T¬ DÒ ^ R>P.LÃíz;Q D Yh <sup>®</sup> <sup>^2</sup> <sup>w</sup> <sup>w</sup> <sup>E</sup> EÊIPÖÕz&Ûh  $y\ddot{I}/_{4}$ %f4fiD "...VR'×õ• "'<U'\* òÈ0ÖÙô5ÞUÔUÑr|šöv\?>X•F<+  $\Box q \Box \S^* \Box Š^* U B A S (\hat{E}) = \hat{e} U S \ll \Box$  $A \otimes \ddot{Y} - J \Box ^Q \ddot{O} \Box f$  $#iF \bullet \Box$ )  $\Box . \langle 8 \check{Z}'' / V0 Ew \Box ; YF$ 

 $O_{U} OEn \square^{2}k_{y}$ uþ□;°§)jõ¤7Đ□D′‹bÛ÷Åõ□  $\gg \Box 8\hat{E} *TM \Box \dot{y}'' ]''1... (a) \tilde{O}/c \hat{E} D^{1/2}$ DÔzjEW\*â]'□²S□D¾MCU□"€  $\pm \hat{U}\hat{U};F\hat{u}[u \square \tilde{o}C^*]$  $\cdot$  DKÔ¥<sup>a</sup>9  $\Box$  ''èì9Š- $I * Uqb^{o} \S \mu \Box \Box \hat{I}, \ddagger Ec \Box^{a} \check{z} \pm^{2a} \ddot{e} \ddot{I} = oQ \check{I}$  $pi \square > C < a < CK'i''f < (n^{j} \pm A'A:c \square$ ×F¤ſ  $\tilde{A}$   $CE/\Box \cdot 0 \Box$   $\Box^2 A \cdot VKLj \ddot{A}$  C+

## $\pm a \Box'(\langle \hat{u}\hat{I}^{\dagger}\hat{A}\phi|\Box \ddot{I}\Box wu\Box)$



p□w,8Ôúµ□òûǵOS?□Êyöu,Ílí ð□@Œ□□J€ßß"Đ%\_-E□rã□Y";□U□5¾□(äÖ&¾□% ÿ\*!"<□¬□Ò□‰m



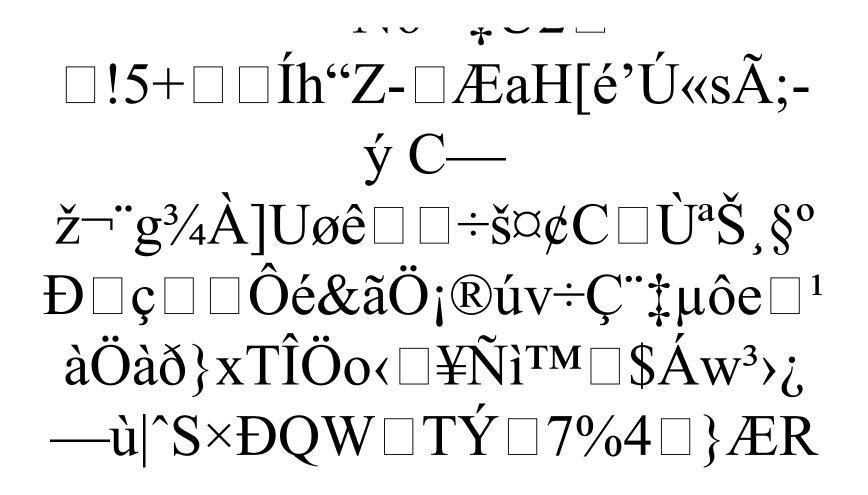
#### □6 ¥0□´□¨Ò; †¤»□T□CØC5"□£ñ4 o#¹–UÒss□uw¨H¯°\$j P´¥^-□["□o□NÓÂ`OC□©- ;šs!

grËCž©Ê©EH‰Õ:¬mê©□;i<sup>3</sup>Bç  $\mu$ -4è  $\Box$  eô±%  $qx\$S^{a}\%^{3}\tilde{a}\%^{a}Ta^{6}\dot{A}^{-1}\dot{o}r^{-1}E\ddot{I}$  $n^{\dagger}\dot{Y}!\ddot{e}$   $a\lambda e_{i} (Ry \square \sim \ddot{U}_{2})n^{TM}\tilde{N} \square \hat{e}$ »y□'~□¦^ifê‡?□Ò°[ü'å'□Jy‡ðaN  $\ddot{E}\tilde{o}([\check{Z} \square m @ \acute{E}^{1}/_{4}\acute{E}\acute{y}]6-; @ \hat{E}^{2} \acute{E} \square X$ ù□MÁÓw□ŵ□urÕ¢#ШŒÇ\$/  $\square/(Z\square$ 

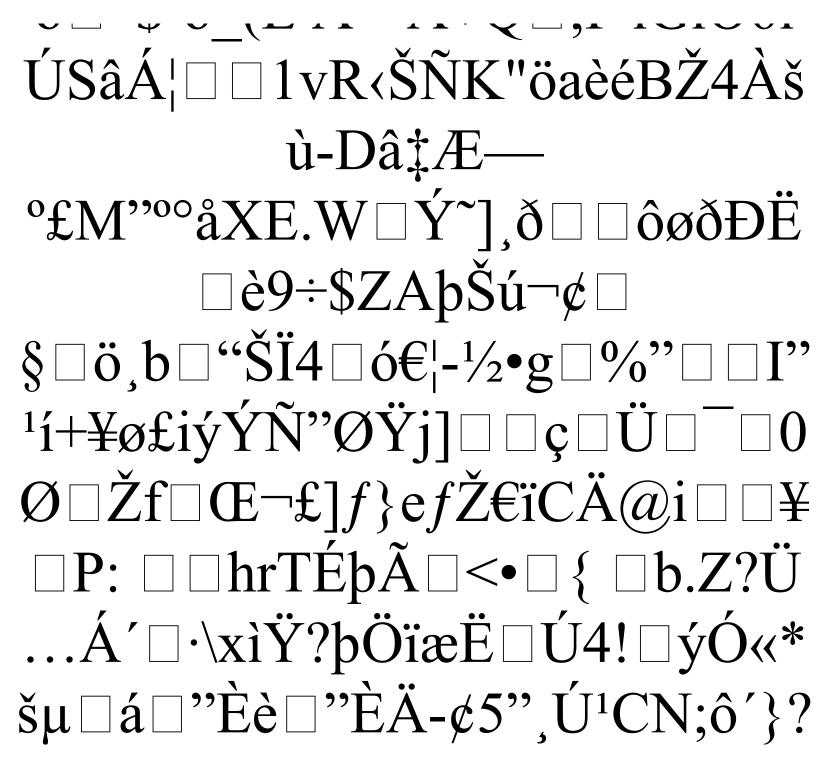
S3ô(Jq  $\square$   $\square$  'u  $\bigcirc$ è f'' % -b GlĐkâ'  $\neg$  æ  $\check{s} \square \ddot{u} a \tilde{a} \tilde{O} = U, \tilde{A} \hat{E} \ll \Box z e \square c \square$ fêÞÂP@"<sup>2</sup>RPy]ÊLÑæ,ïµÜÉÕok t/Y»] $\Box$ 5êWa °Đy...nu© $\Box$ †<sup>†</sup>Ó¶À  $\gg 5$ ;UEIç  $\square$   $\square$ <sup>a</sup> ÕðÒ~7Ÿ □ Cx □ uʳtÅ-

## b1µ¿f‰ĐäODÓÒf□57-

## içzR¥Þ€ÃH□³Ló^Ý9v˵h>[% /6P²:□&ÞQQ~«-HTOó&Ž×"ÊšãY\_\$□ßN''jÑĽ£ iRY '□N□□ò¥;□bãĐqû— N□úÎ\*þJÕ†^FÔF



 $= f\ddot{I} \Box \P \check{S}_{i}^{2} - \in, S_{i}, \hat{E}_{i} < H_{i} & \emptyset \Box Z_{i} \tilde{n}$  $\Box \Box Y \Box \Box \dot{E} U V! n \cdot ?\dot{A}^{\dagger} f' \Box \dot{I} g \bullet y \dot{E} \acute{e}$ WÉ3V<÷p§ □ □€X<sup>n</sup>§bl¿¢"4]N<sup>2</sup>  $\dot{O}sO!$ ;  $\dot{T}^2 \Box$  'ë $\dot{U}$ 'š  $\Box \Box \langle \Box 9AEgm'' j \dot{O}^2$ œC"]«;èýk|è□ÝñV³?3N;.□jÈ"âd  $\Box \delta(a) \acute{Y} f 49 \Box \overline{D} \Box_i$ **PI**<sup>′</sup>J  $\ddot{a}z \neg \mu n \acute{O}^{a} \{\hat{I} - \hat{a} \supseteq \tilde{N}z. \% < 0k \cdot \in T^{M}c[\ddot{o}']$ .Ôj□4Þ\*£ "WB^□bæËÏ×LÌ □ë4  $\acute{E}_{A^{r}} \square \square \dddot{U} \square \acute{A} \square \breve{S}^{\dagger} \square \square K9-$ 

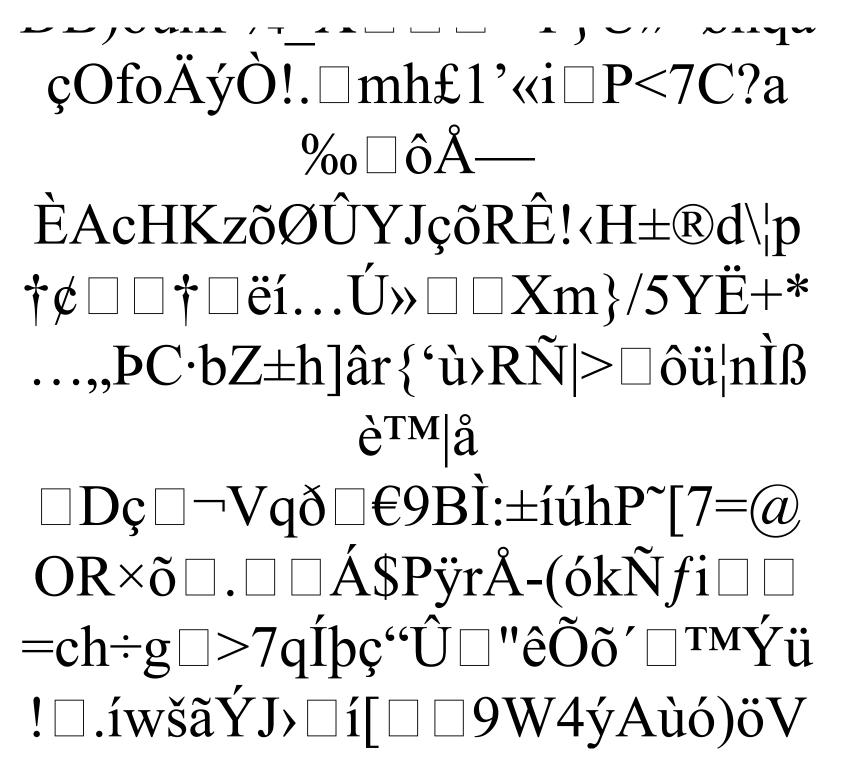


O□#Kq-9JYæ€□U– 9?<éè $\square \tilde{A}^1Gý \square Qe \square a E A^{\square}v#$  $\acute{Ot} \square \ddot{I}T^* \square \square \hat{a}r \check{\partial} \square !V^{\bullet} \grave{O}C \grave{u}p \square \ddot{y} \dots *$  $\Box \Box^{2"} \Box G6 \P \langle c \in \ddot{O} E \dot{u} S \dot{I} \dot{o} \Box W \ddagger \&$ uËâ©ögý–  $\tilde{a}\tilde{o}\pm n\pm\%*i\square$  " $\square$   $\dot{O}$  $\dot{D}$  $\dot{O}$  $\dot{Z}'1V$ ,  $i\square-$ □vb;ê·Vå°©1□öe□m '; $F|\Box[L•A\ddot{O}P\Box\hat{u}^{TM}\Box N\dot{P}|\hat{A}w/*$ poLojõ 🗆 . 🗆 B

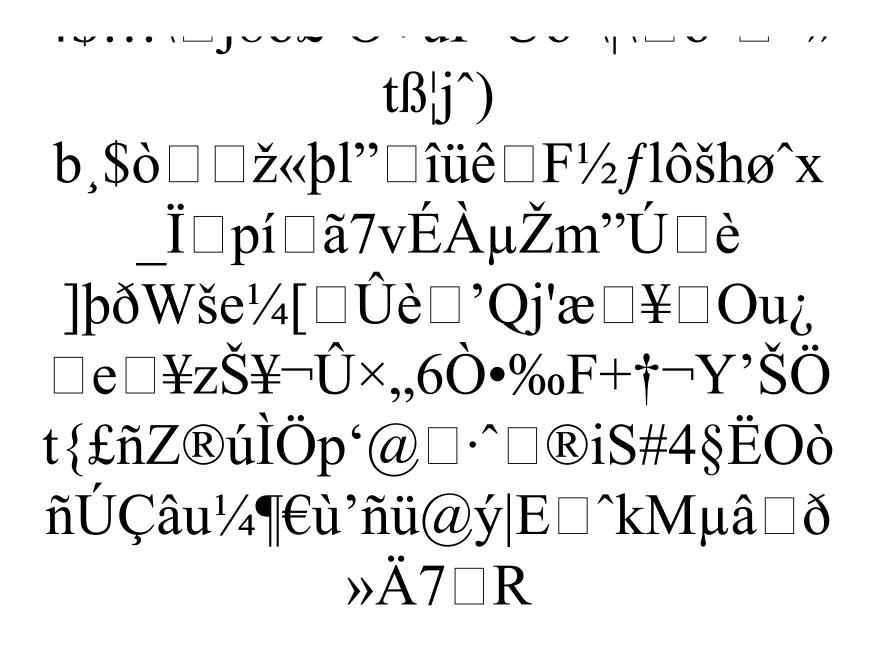
#### é<sup>™™</sup>W□¿EIó<sup>a</sup>□¢#□ùIyø¨I□□ $\Box$ ]1P°W(eÀ,-Ï1 $\Box$ a $\ddagger \forall \frac{1}{2} W \hat{o} \hat{u}$ $\hat{f} \hat{o} \hat{O} \hat{e} \hat{a}$ $``\Box^{\hat{F}}\dot{A}V|\Box^{F}\dot{F}\dot{I}-\Box\dot{D}\dot{U}\Box\Box^{2}\dot{A}\tilde{N}\Box k$ Ä"[2þÎKž□š9□□kû $\hat{e} \square \mu M \in \# \hat{e} \square \square \hat{e}_i = \hat{s}_i^o$

### fû,æ<¶õ¿£□™ý·;-□ËÍ

#### :¾ýuEŵ)URAÇĐ*f*\*å^ Z‰‰ "'HiF , $\hat{E}^{1/4}q$ KT"4 Α $+\delta7^{1}8\widetilde{O}\acute{e}\check{z}``\ddot{U}r...c\hat{E}r!\square\sim+K\hat{o}$ ÝÞ□Ù;ï¤ÈÞ□œeá<&wZEÅ•^r«u í¾rÚ



 $N_{G} f 1 @ Fl@I LO e^{\hat{a}} 2^{1}/4 | ia d \div e^{\hat{B}} c^{\hat{A}} | ia d \div e^{\hat{B}} c^{\hat{B}} c^{\hat{A}} | ia d \div e^{\hat{B}} c^{\hat{A} | ia d \div e^{\hat{B}} | ia d$ 



#### □°□Qz□;rógþ ý\□áX

#### $[\Box \hat{E}$

^qfGÕßí±Záæ€ðHïÛï=□ñ□7,U  $4^{a}G\} \Box I \Box \mathcal{E} O D \subseteq \mathbb{C}$  $7 \Box iCíð MÚ \Box n \Box \Box Ç ê kW,,$ ó<sup>3</sup>có÷"xwâø 🗆 wøM<sup>3</sup>¤Ÿ÷æHåYä‡ ~Miž §3nü [y 9è0ÃZçØ.ê\†5  $D\tilde{o} \square \hat{U}_{2} \square \hat{t} \hat{o} z \hat{u} \hat{a} \pm \square \square \emptyset H \tilde{o} \hat{e} \hat{O} x$ c<sup>TM</sup>|j£ÍiIL RE□R8G('EĺájA®□Œ¢r□õ  $\square \} b^{\circ} Xi \ddot{O} Y \ddot{O} i^{a} \dot{O} \delta R^{\circ} v \} \square r^{a} [\square$ 

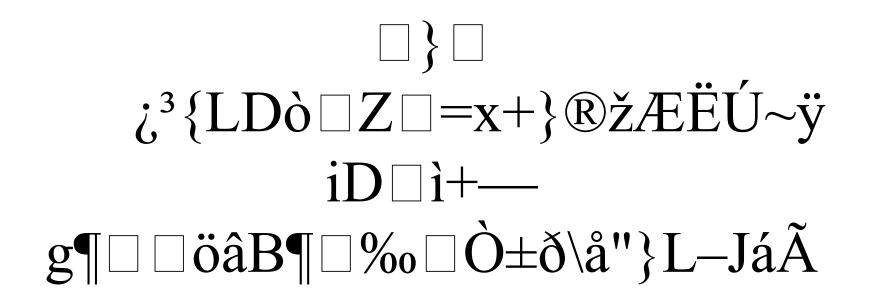
 $EF f 0 \ddot{a} = |N \dot{u} \otimes s^*| \pounds \square 0 \ddot{a} j \oplus \square ] \pounds \otimes \square$  $\Box K \Box v \Box \acute{e}2^{a}FQ )^{11} + uE\dot{I} \Box \hat{u} \ddagger^{o}a \Box C$  $n \square * fd't$ K!  $\square I (\square \square 4 \tilde{O} fH 0 \tilde{O} < c \tilde{n}$ HdhPY $\Box$ ÍĐ\* $\Box$ E.•x±@§ËJcC $\Box$ 6  $\Box |7\check{s}\varsigma\&P\dagger \dagger \Box > \hat{E} - \Box D^{ao} aR A \Box \Box^{o} \langle$ Ta«ô¼¤ŒLu ø  $[y\&Buf] \times 0 @0 \square \square \square \square @ED8 \square IR8$  $\frac{1}{2}R\ddot{I}$ ]·Ì''‰¨Ô×w $\Box$ Òå<sup>1</sup>/4\$ ýÎ}CÇ \[]õ6¬!Ö;WÊäà%e''‰®>Ñ ugšqJW^oTyÚEMr<sup>-</sup>Z+š=ï+[¤Đ  $\mathbf{V}_{\mathbf{A}} = \hat{\mathbf{\Gamma}}_{\mathbf{A}} = \hat{\mathbf{V}}_{\mathbf{A}} = \hat{\mathbf{V}}$ 

 $\tilde{A}(a)$ { $\hat{U} \square z \delta' p f?" p \square \delta e c S 0 \square$ CR,,Éï§à  $\square \square \mathbb{R}^{1/2}$ ë'è°°Jl $^{1/2}$ y"ê9+B<sup>3</sup> 7 а:hzÆüv >PR:Ñê&тмЁ«  $^{1}BOS^{0}U \square \tilde{n} \square \check{z} \neg \phi \delta O^{0}Zdz \ll \square \ddot{U}$ ... $\pm RQ^{a} \oplus \hat{D} = \hat{U} + vS' \# = \Box \hat{B}$ 'Ò&õ<7j0n□□eß—"  $H \square B > \tilde{Q} |\dot{E}I \square \hat{U} \square \dot{O} \cdot \hat{U} \hat{e} W \neq Oz \hat{A}$ " 🗆 ßà 🗆 YO"Ñ 🗆 🗆 /â¶ÏFïxwÆÛ«¶'  $\hat{o} \hat{e} \supseteq \hat{f} \ldots (w \hat{D} \leq \Box \hat{e} \Box \hat{e} \Box, \ll \hat{o}\hat{E}a\mathcal{A} = U^{a}h^{0} \otimes \pounds = 87$ -

#### ŽAÃ<ŸTd,z¦£ÀÑ3□Jñ

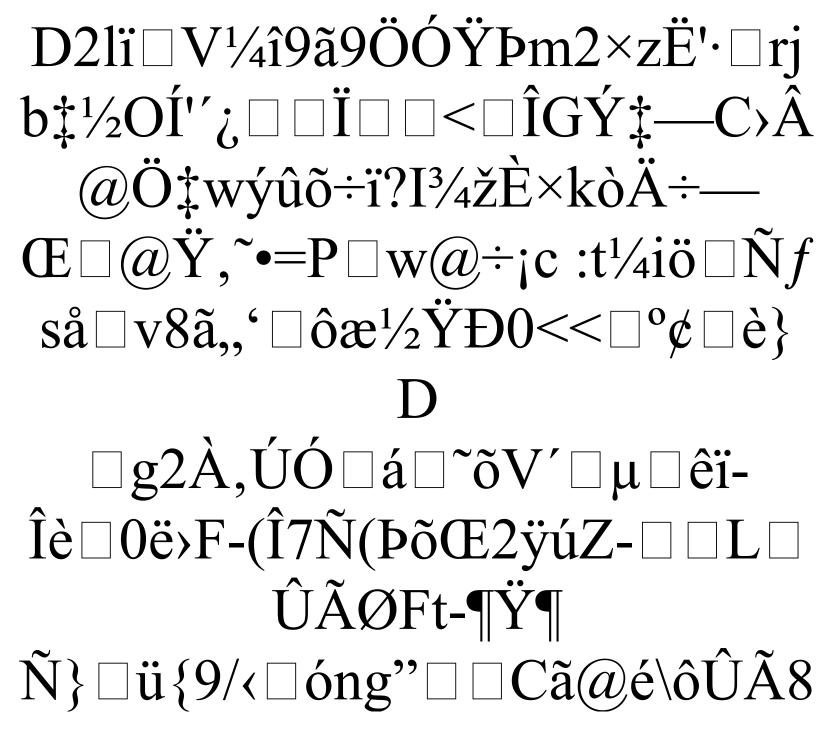
 $A \grave{u} \Box tsnPT | \Box \grave{i} \Box \dot{A} \Box 'U^3 I \Box \sqrt[1]{4} ov \Box z$ uý ÉÉ \*MoÖvD<e8U-,íÈ  $\Box$ Î t-ó"\$<sup>a</sup>"µÝõ  $\Box$ ñwgô¼ $\Box$ {Oï pI"^+ã l~mK3íéíOr l EÏ'qh"XÝú -O^>  $"J^3 \square i" \square a \square 3g \times \square Š \odot \sim \tilde{o} < s; \hat{E}1/$  $\square, n(\sim U \square C \tilde{A} + V)$  $\sim 4/\& \langle 0 \rangle \hat{U} = \hat{U} = \hat{U} = \hat{U}$  $\delta N'Y \square \hat{A} \hat{O}; ^{TM}h \notin b \hat{I}e \square \square I^{1}_{4} \tilde{A}$  $Y \square$  "``še  $\square ... \hat{O} \square = i \gg \square \hat{I}? A \square U0$ 

#### $3/1/\Omega/\Box \Gamma_{-} T \Box \Phi$



#### 

K:Tó□'ÈæµÖ-□ÞŽ□ŸÅ/¨äþ(† ÉQôLH,âdÒ □S¢‰ùž□Ï,□ ÷þ¶àèý•&<GKžÁÇ



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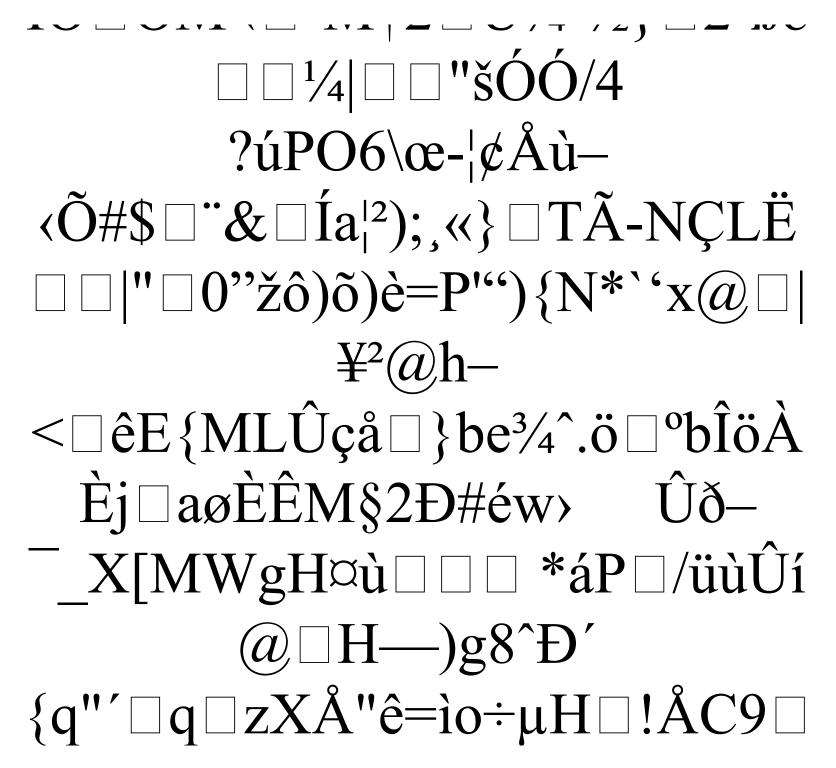
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#### ÛĺíËïÒöêÓ-¶'§9RÅßB¥×mûôê— $\Box U \dot{\Psi} \dot{a}^{TM} \beta \tilde{a}^{TM} \ddot{Y} > \dot{Y}^{1/4} \gg K \Box mW$ onðx¢Œÿ¾Ú¾àÿãÍ»□ã3Ûݧ□□ $\ddot{y}\dot{y}/\sim\dot{Y}$ $\ddot{A}$ ?<sup>1</sup>ísl ¬?iëc/[M{n©mw $\Box 7$ ; ùû $\Box \cdot \Box \Box B \Box xý n \tilde{n} \times i a b \tilde{a}? ?n \ddot{y}$ úðãýãëßÞý⊡vf;Æ⊡·j

r\*\* \* \*\*\_\_ || ~ ``' \* J & \*\* / `` `, 3 ~ ~ \* \* \*  $\Box g(\emptyset \emptyset H \emptyset \acute{u} A \% \P \Box n; \sim |\frac{1}{4} \Box \tilde{0} \ddot{0} \tilde{0} \Box \hat{U}$ ÷wï?àí÷□□ï□¶Û?½~ó,ÝþíÝOo  $\Box \cdot \Box' V \Box y^{1}; |i; \Box \acute{y} \ddot{Y} \check{S}] \langle \ddot{A} \Box I' \Box \langle \check{z} \Box$  $a\dot{u}'m-\tilde{o}^{1/2}\#id\Box r \neg E \Box a\$$ TM9݉æqšèDZL'ÂÙአ🗆 ½1G#\$ ôáD×□□ý□hß©s□□íÝÑ£ÍÙOt L,yFÇžF,{G?öÔù[ -õ,,òzjîð



# $\dot{O}J'-\Box^{TM} @ \dot{O}d \cdot \Box 4\% \& Eb\% \check{S} \times \Box \sim \Box Sx(,b''|\Box 5^{i}\check{S}iIi\hat{I}I\hat{Z}k[O\$\check{e}I\tilde{A}\%,\Box] \\ @ @ @ EF \Box XuGo`|^{\sim}\Box 1\hat{e}7,, \hat{E} \Box \\ & f'' 6I\$U\hat{c}a\hat{e}\hat{U}, \end{cases}$

 $\hat{U}\tilde{o}\square \square \hat{e}\hat{C} \times x6 \varphi \hat{I}\hat{U}K -$ †Õ·ù°]¦□ËKê§®□—  $\square TM_V \square = \hat{I} \square \hat{u}\hat{u} \supset \square \hat{N}$  $\ddot{U}B \in \langle \Box' j G \ddot{a} Q \langle a \rangle g \Box \Box y \}^{a} t$  $\Box$ Ìôµ\*â÷RÒ<sup>30</sup>/<sub>0</sub>';<sup>1</sup>/<sub>2</sub>,ÆMåYÓ<sup>3</sup>/<sub>4</sub>gÔ  $\square \tilde{N} \square \square \hat{e} I \square \ddagger$  $f^{3/4}$ 

#### 8ÚBØC,Àh{ÆZó□Q¦□žQ>ã5áw •%□1«'\*

#### Lcµx

ÝŠÓfÕë'xŸL(Ùe†,ðä'ó†•ÃRQT ÈY&Š $\square$  $\dot{o}$ •~ié,RÝBâ $\square^2\square$  $\square$ "6{ >' $\hat{i}$ (a) $\hat{a}$  $\square \times \square \hat{E}! \ddot{u}$  $\square \acute{o}ras \ddot{E}Nq^2$  $\square$ B□O] €úB%□Haóò□Nî"ö□  $\neg \hat{I} \square \hat{I}_j \hat{I}_k \hat{Z} D^2.Z \square S: EN \cdot \hat{E}g''K$ N  $\square \langle \Box \ddot{o} 84 \Box v \dot{U} 9! \ddot{E}? \ddot{e} \# \Box \Box ri'' \acute{I} \sim'$ 

OI2FY $ij \times g \square \square \sim WAc^*, \delta \gg 80$ , cj" ]'CDëb©|?ê&«Ûé™#Ͱm²œO¿½È B<sup>−</sup>a □ Î<sup>a</sup>úµ:"ý@"A,€ž □ äp°Ù)À«ö ô>¡Jé(|'è□ç3'^a,,□yçÏFŽúw'F□□  $q \Box \Box O' \Box \rangle \check{Z} \in d" \pounds, V \Box \Box \Box \check{O} \P$ i©âNì~s‰~f/¶ùy  $x \Box, \ddot{e} a \Box \Box \tilde{a} \ddagger \cdot \ddot{a} k \dot{U}$ — ZØÒi×ÁU…Öo m£ÛEÔž□àÏ7o/"Õj.aT&Æ□P- ° Åp'I ÷ 

 $\ddagger 1 \langle US1 \square Es \square i Jo \dagger . \hat{U}, c'/4 \rangle D \square \hat{u}$  $\hat{E}B \Box (\acute{e} \Box (\widetilde{n}_{i} \Box \Box)) \cdot \pounds O \Psi \langle ,, a \S \pm A c \rangle$  $\delta$ ]'Qlå\ $\square$ <sup>a</sup>S $\square$  $\square$ Zâû3eÝPuø:¥F6  $\frac{1}{4} \pm \Box \Box \ddot{A} \$4r \Box r1\dot{e}$ ,,»žÇ $\hat{O}^2$ y,zRãérð  $\Box G \Box \overline{D}ZZU \Box$ Onç $\emptyset$ I  $\square$   $\hat{O}$   $\hat{O}$  ï AQÓ©7,bI¶B°tj.æÕÕ>-°

# $$\begin{split} \dot{U}N^{\alpha}pC \ll & |\delta \square \square \square \square X = \hat{E} \\ D\hat{u}\hat{a} \end{split}$$

# $\oint \Box \dot{\partial} \mu G6) \check{z} \dot{i} \dot{f} . \ddot{O} \circ \Box Z \ddot{U} \square e \pm = \Box \ddot{O} \Box \Box \Box \dot{O} \circ \Box \Box \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{O} \circ \dot{O} \circ \Box \dot{O} \circ \dot{$

 $C_i C < \Box \{ \ddot{o}_j \check{S}_a ! ... \Box ! \Box^{33}/4 \Box ``b \check{\partial} ET \}$  $\dot{O}w"\bullet \Box c^{1/2} \Box h E \Box U A T n M \bullet / \Box J \Box$ ðçJ□~ªÈÉë¦Å- $\ddot{E}f_{a\mu}\dot{U}_{S}f_{\dot{e}}E!\ddot{o}''_{1}\Box 5''_{2}\&\hat{O}I$  $\frac{1}{2}$   $\partial Fle 2T \otimes \tilde{n}c \square [\tilde{n}\tilde{o} > \$\ddot{e}'' \square \div . \square , \acute{o} \cdot$ Aä  $a \overline{D} p z(a) \Box \mu U * m C E \Box q - \overline{Y}; D \Box$ ï‡V□]PCK□uÞ²‹ÕÞYùãðp•î  $^{*}{} b \to G \&^{TM} d \Box$  -ÌÃP(†ç»øÎb2□[€(a).fb¢'½LáJ□f]

#### ¶□:AUãO¿£â:ÿ½ M|¼á□¼îT^□ S%¾áO\*Ù÷□Eòpv¥ pþ□— ¬g]âR'æ'¹,ĐÌ□GÚhR©□«h>[□ Đ□

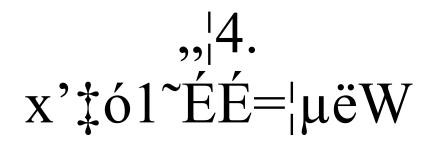
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» » MÅÅ—

(' $\Box$ g0T/Ft|Ö $\Box$ ...â® $\Box$ ) $\Box$ Cm×u $\Box$ 8Je" $\Box$ ø-é'"<A±šNÉðá $\Box$ †¶‡ÛQ¶o Ê $\Box$ " $\Box$ C"WA $\Box$ Âô'áØPÚ $\Box$ ö8C<sup>1</sup> GÔ¬ÀÔ¥§<sup>3</sup>/4S $\Box$ J<sup>TM</sup>ÅH(÷Âü $\Box$ f êA"/Ç# $\Box$ 1/4ÒzD{ $\Box$ 1  $\sim M\hat{e} \square Pk6Y \dagger p \ddot{e} 3 \emptyset \dagger Y TG \square \ddot{E} ?$   $= [\square ? f \pm \pounds \dot{y} \mathring{u}^{\acute{E}} Q f \dots \square \hat{1} 6 / U \square 7 \square \dot{z} \square$   $= X6c \check{d} \dot{y} \check{\varsigma}^{-3} \hat{e} \square \ddot{i}^{3} \tilde{a} (\mathring{A}s D \square \hat{I}^{"} \check{Z} \div o^{a} T \ddot{I} \check{e}' \square$   $= [\check{s} \widetilde{O} \% \beta \acute{e}^{*} I \# u4fg \grave{E} wz \square \hat{v}]$ 

/²>Ýø°¢[7ŽŸÃ7ýS□²•□ÊŽugÈ{  $o]3 \square ! \odot \square De...3X-";3 \ddagger \hat{U} \div \hat{U}$ 謫ÛBŒÛs¨}ò@¢-□AGSt}P□<sup>TM</sup>□×äÈ0ä)ë€□Ó‰7 8ª‰t;fOB□oʻ;«t†Í[Ÿ0DÊÝz‡°¾  $\Box$ ÿ^\$

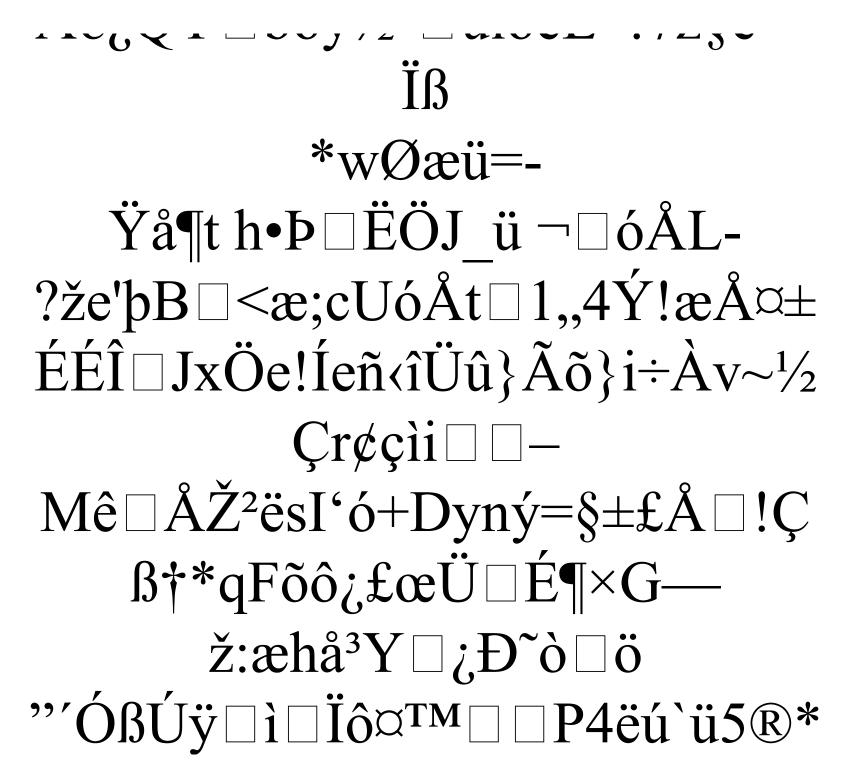
 $\begin{array}{l} 70^{\circ} \square \ll |WNL`; \square \div O:GY\frac{1}{2} \square +A\frac{1}{4} \\ \check{z}T\mu\grave{I}. \square Q \underbrace{F}(3\frac{4}{4}) \square GiJw,, \hat{u}_{\ddot{z}}\eth'': \\ \square C O \widehat{I}L \square \square 6\% RQ \widehat{A}4" \pm \check{s} \cdot \square -; *pI \\ \ddot{Y} - \widehat{o} \ \& \square \bullet s^{2} - "ya - V\widehat{1} \end{array}$ 

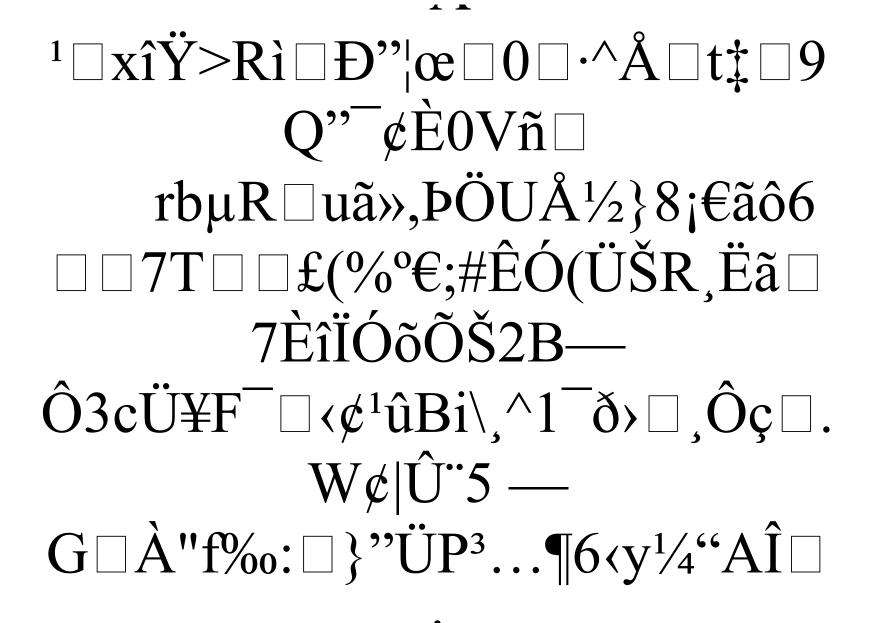


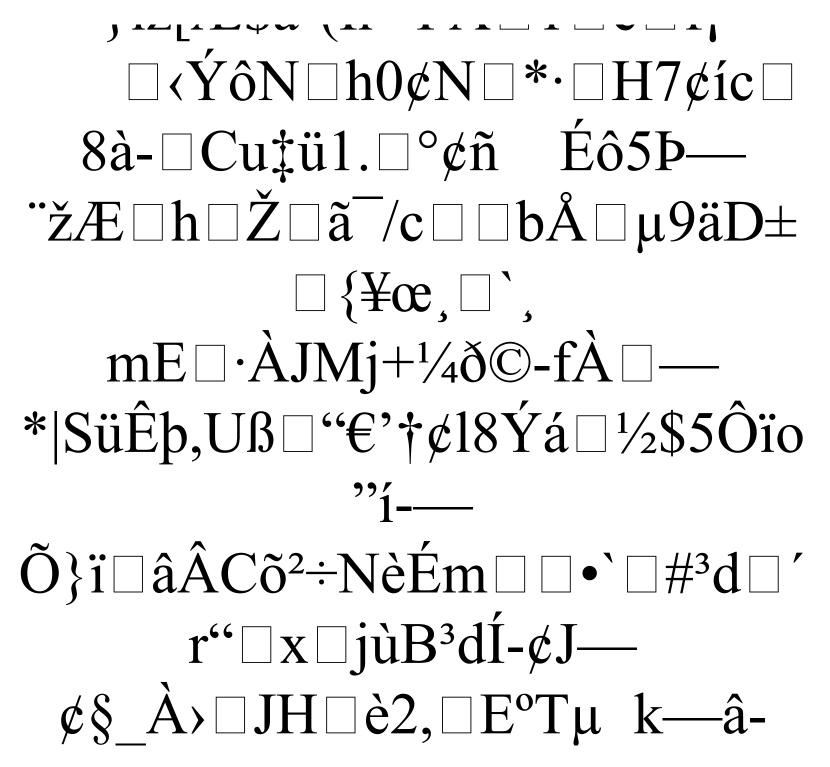
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<sup>TM</sup>ò.,f^v □ʇµ¶è<sup>a</sup>е □ÝæNëqoĐ-ÂÝ<□âe,,Ù;-²Šk-20vØß B¦□□□ æ□-þ\□:þ½□Û¯üo(K¹£′¶□J¶ ¾£9\_t□ÄQÒñ□,8Zj¢W~¿£□BW d□G1û†>ý...ì¿3€D~...wÀ□

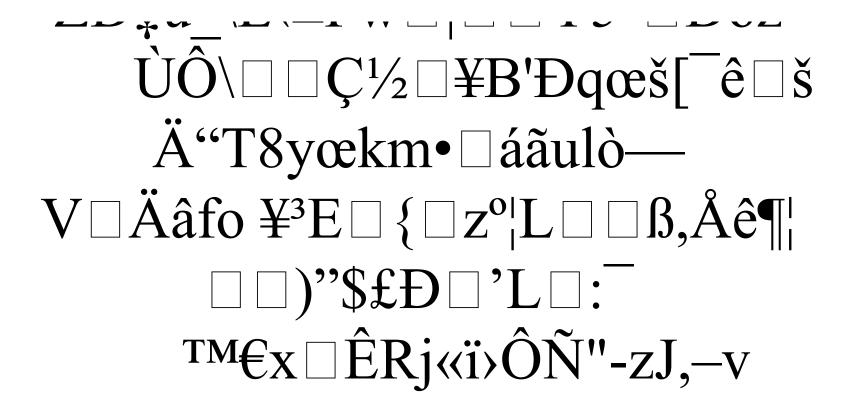
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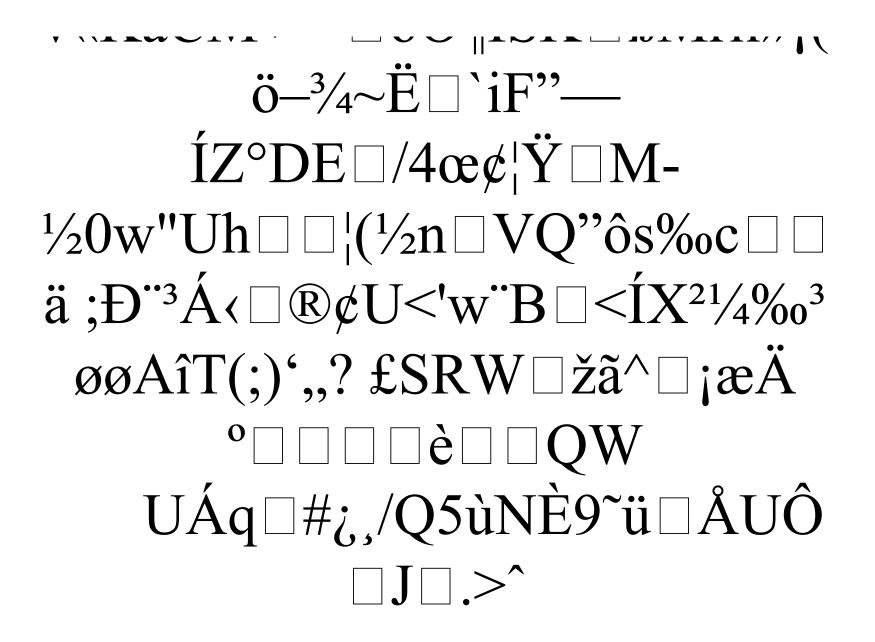




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#### (ml÷



h`\$ $\check{z} \square A$ ",, $\square \hat{i} A \ddagger \square \hat{e} \square \check{s} \notin \P f \check{e} \check{o}$ .  $\square \tilde{O}^{a} \vee \square 5 \rightarrow u \quad \square \square D \longrightarrow \square \dot{\bullet} \square \dot{\bullet}$ |`ΎóKtüóßÉ£□/4Ý~ñé□óãÜ=ù ,¶œ×ÀĐB4a~ì¬òù□Œ'úÛr¿)aáô ôH'ÞÒ'Œ□¬⁰\□7]?Š¥øŠ  $\Box$ Xì5;þ†ö0),,í<sup>1</sup> $\Box$ ! $\Box$ f $\Box$ j $\Box$ u;Ç  $D \Box '>Q\hat{o} \Box 6\%', \tilde{O}\hat{e}rw \Box `\tau \mu \dot{A}$ Ë2|ÅA1~ãFq"çf□éo¿µWë¦□;N□  $\Box$ Ão7'¢8

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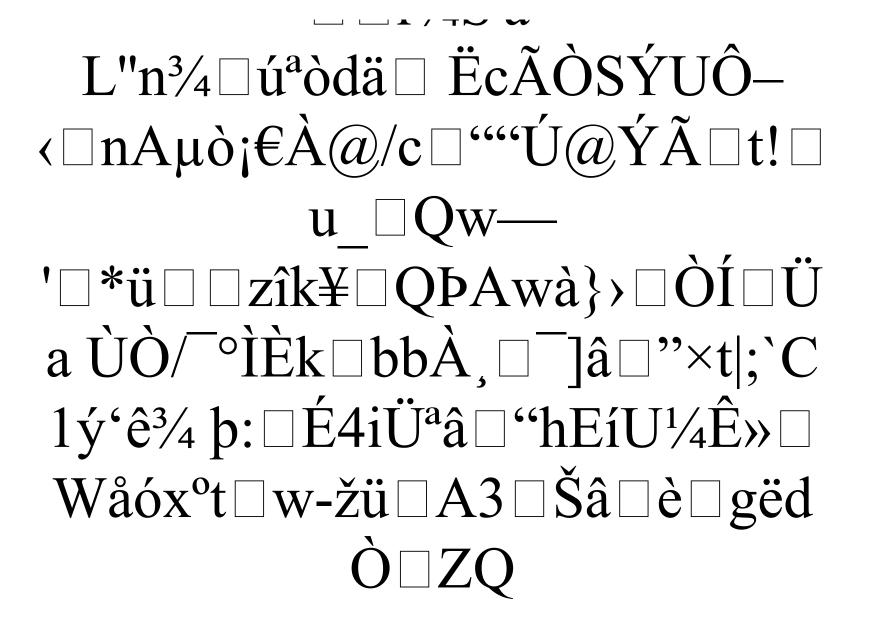
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 $\P O - "0 \Box m (a) \ddot{a} \Box a \Box IO$  $\hat{O}\tilde{A}$ Ie  $\Box$   $\hat{\Box}$   $\hat{e}$   $\hat{S}V$  $\ddot{U}$ ø  $\Box$  -)  $\mathbb{R} \times \ddot{a}(a) t \hat{a} \oplus -\mu((O \square X \dagger y \square i) \square \hat{e})$  $t \mathbf{E} \Box \Box \cdot \acute{O}si \Box \Box * \acute{O}\acute{A}t \sim A\hat{u}$ Ì0B£aaC<- $y \Box vF'.v''A\hat{E}[\hat{E} \Box R\check{s} A\ddot{I}]\ddot{a} \Box \dot{e} (a) \Box$  $\ddot{O} \square \ddot{O} \square sT^{"1} \ddot{O}g \square \dot{u} \ge \square uM \cdot | \{Q\}$ h;, $\ddot{o}$ ['&`Y% $\hat{o}$ Sõ)u`ÚŒ\<sup>-</sup>íìf&...<sup>3</sup>/<sub>4</sub> w----Ä; □8Â



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#### 'ì□T%□®[å±E'UþS"¤A□lèú¡Q' eZ¾Ýt□>,,\$¡Åæ'O@±Ùì¹áö□ñŽ G(ÄS ¦á 6š¢ì%Ü@°÷ùÖÞzÂ□ í□WcûÙÆ õÝB5'K□Nµ ~BeO[

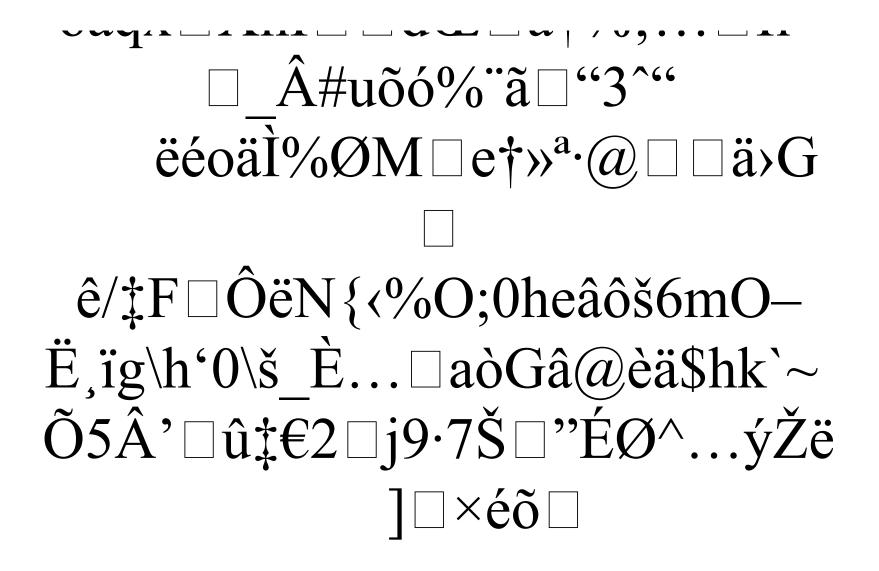
 $...OžO; B\Box, yQ \ll /--\Box \cdot \dot{u} \neq >-$ ÑïÚñ !'Æèfõ7+œ ê†Þ޶çØF□‰ûmd□€y£Ò×  $\ddot{e} \sim C^1 C - \hat{I} [hRK \Box q \neg \Box h, \dot{u}P \neg d1]$  $\check{S} \times C < \tilde{a} \times h \otimes \tilde{z}. #"mr \flat = \Box z \acute{U} f$ ï[§÷Đ'@Ï□³ÕÉLÂ~EÔŒ]§ö¢'÷s Nt  $\Box$  V'...Õ÷ë;  $\Box$  q&- $K I E (fe \hat{c} t \ddot{E} \square \ddot{i} \square t \hat{i} \square q) \square A E a n -$ F  $\div a.\#'\hat{A}\tilde{N}\overline{D}ElF1\Box\Box^{\dagger}\div d\Box\Box\tilde{n}$  $\Box 0/K...I. \land O \cap L \land \simeq O D$ 

# $\tilde{o}Z \square \cdot \hat{a}Z^* \ddagger \tilde{\mathcal{A}} \tilde{z} \tilde{\beta} e \hat{e}L \ddagger \square z^{\circ} \tilde{o} \square, O' \square$ $\square \sim wR^{"}4^{\hat{i}} dM \mathring{A} \acute{a}m \square 8 \ddagger \square f \square \mathring{I} P 0 x \check{s}$ $8 \square h \square R \hat{U} \square \hat{o} \square \not{e} \pounds E \# e^{\hat{i}} C O C Z \grave{E}$ $\square i \mathring{A}$ $' \cdot \bullet @ \{ \square \square z^{"} 9 JL 4t O \hat{e} \acute{o} \}$

 $\ddot{a} \square at\hat{o} \sim C! \dot{u} < /HA7\dot{A}D^{1}/_{4}F \square it \square$ ÂtÖýŒq6Õ \\YðçÅ \\hbightarrow hb3/4Ã<vjzÝ U'fà $\Box$ Réø $\pm$ <sup>3</sup>è+tì,,ÓÁ $\Box$  $\Box$ Å<sup>3</sup>/<sub>4</sub>ÀŠ $\pm$  $\Box$  `M $\Box$ ÇZ‰öWBøŠ $\Box$ MX<Et2R ۾oâŒõ>ôa^t□í<sup>-3°</sup>‰°[,Érë·□é□  $\beta \tilde{p} a e \Box A = \Box n a' u \gg \Box R_{i}^{C}$  $6 |cV \square zY \ddot{E} \dot{I}^{o} \gg \frac{1}{2} \tilde{A} \square; \langle \ddot{I} \hat{O} g \beta \check{Z} \dot{e} \square -3 \rangle$ q;□èJ¬Ûë÷ö\ïĐQâ  $\ddot{A}\dot{o}$ -£Nz4- $\hat{E} \square > \square \}C\mu\ddot{u}6T$  $X \overline{\partial} \square \square \square \check{Z} Y \mathcal{E} \mu$ <sup>\$7</sup>T-

#### WO2õýLE $\Box$ $\Box$ k<sup>2</sup>dA<sup>3</sup>/4œ1krv'I\*~<. $\pm \hat{e} \tilde{n} X \hat{i} \Box \check{z} \Box 5.Wq \geq \%$ $\hat{U}b\%b\Box$ , $\hat{e}$ ( $\hat{w}\ddot{a}^{TM}4YL\hat{o}\Box$ -, $\hat{W}\tilde{a}z\Box$ ) $\pm' \Box \Box'' Žíè:#; \sharp \mu l'/_4 \mu \Box$ -Ï yiZ0f □æ|Ÿ‰j; □†uQJ □5F □" $\Box Tl \Box^{3}/_{4} \tilde{O}2\dot{A}'' \Box \check{S}...; e \Box \langle a \rangle \Box \ddot{u}^{1}$ G΢÷Òc□

#### $gm3(\tilde{A}l\ll)W\Box E\tilde{A}^{1}/_{4}>\tilde{A}I\ddot{I}\bullet E^{1}/_{4}6T\dot{u}$ k>aPØXêÆRC"'Þ!úðý·ÕB1§ŒnP $\beta$ ¶: $\pm$ ò,<sup>a</sup> $\Box$ $|j.~\Box \acute{E},... a9/tfD \Box PuÆ,.. š \Box P$ $\pm Qu \pm i @\ddot{U}] \circ \Box .r x \acute{e} + 4 A \Xi \Box \ddot{O} c$ ðvÑc¶È\ú"

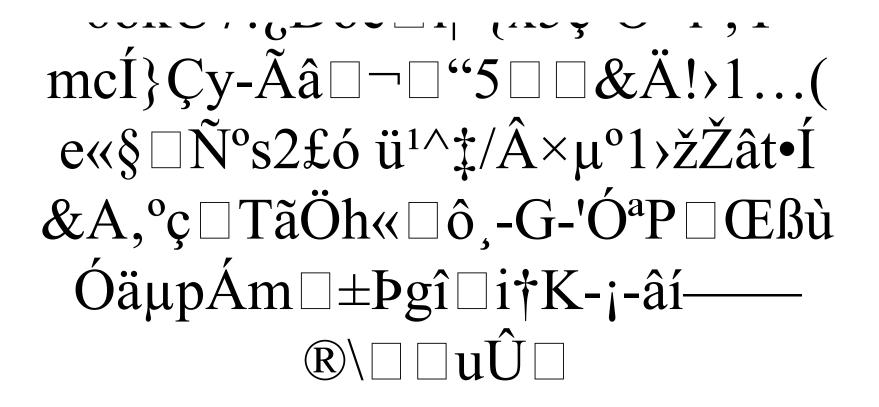


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#### $b\hat{A}'\ddot{e}i\Box 3i\hat{e}9\S 2ub < B\Box$

 $\div \Box 4O^{1/4} tY \Box DY > \ddot{u}G \Box a\mu + \dot{e}aqO[$ } O" Uç ŽV Ïä³nhõ[IÏ~ü޾ÎP  $]\dot{O}\dot{I}$   $\square$   $\square$  TMk ž ÃZY¥àH-€Ò□<□Óq¯@<Å□ «WUZÝlØ"3û6Vû2œ□;%□m "f'ëž@ $IS_{4'} = 1 \ddot{A} \tilde{O} D T =$  $V_{Z} \square oM \square \square (\frac{1}{4} \circ \check{S} \square \check{B} \dot{E} n \setminus F^{-} \square \ddot{u} \ddot{u} S$  $\neg \{u \acute{o}\& \Box: i \acute{i}\acute{o}ŠbUb. \times \Box \Box \& \ddot{E}e \times \acute{o}B$  $?2^{a_1} \square > \tilde{o} \square \frac{1}{4} c \square \langle I2 \rangle \rangle ^{3_1} i \neg W \square \rangle ^{0_0}$ ÄWFÝð +÷žäÙÔ□□švÿ□,,□õr (----)

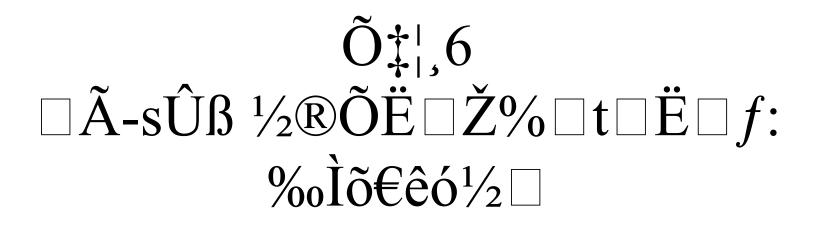


#### U& Lê‡E" Q?,æöŠÒ6µ<sup>a</sup>vôz>;÷ÇRÆ"□eãšB $\Box b \ddot{i} \mu \dot{j} \dot{j} \ddot{u}^{1} \hat{a}w' \Box U \Box Å 6^{1/2} r \tilde{A}$ '€ $\Box D \Box E u e f$ $\ddot{E}\dot{y}$ ; $\Box d^{1}$ " $\ddot{I} \Box 'z \alpha^{1} \Box \Box Jc \ddot{E}\hat{e} \pm l \dot{u} W^{1} W$ ëtžüÛB \@ @ «e>,îf½ « \^ž \/k†ËE $E pL6\ddot{I}$ ]<sup>1</sup>/<sub>4</sub>u $\mathbb{R}a^{1}\dot{E}\dot{U}\dot{c}$ " 8)\*èîÁb·§[¦ĐÛê□ÎäLQ áÿ!|™□

 $HP > 7\% e^{m} 150$  $\tilde{O}^{*1/2}$   $\dot{O}$   $\dot{A}$   $\dot{I}$  6R/FO ( $^{\circ}$   $\phi$  y ] D  $\hat{O}$   $\delta$  f B  $\ddagger$   $\dot{U}$ r&□š¿á~/çê^BÖĐ}— ËMDííâ 🗆 ‡ <7¶é< 🗆 🗆 Z镜fÔÈãÎ  $\Box b \Box l.a$ "'E|£Ä $\Box \hat{a}K \Box \dot{E}..., \acute{o}(\hat{l}\hat{e}\ddot{l}\check{S})$  $q \Box f6 \Box \Box \SeB\beta EùÁZbq~64 \lambda c^{2}$ ÅûùÞɬ CäNÌËY<sup>3</sup>ù 2‰ú 2ÇIÔ©èÊ′7 'ϛ,nrïåÉ□2–•a. 

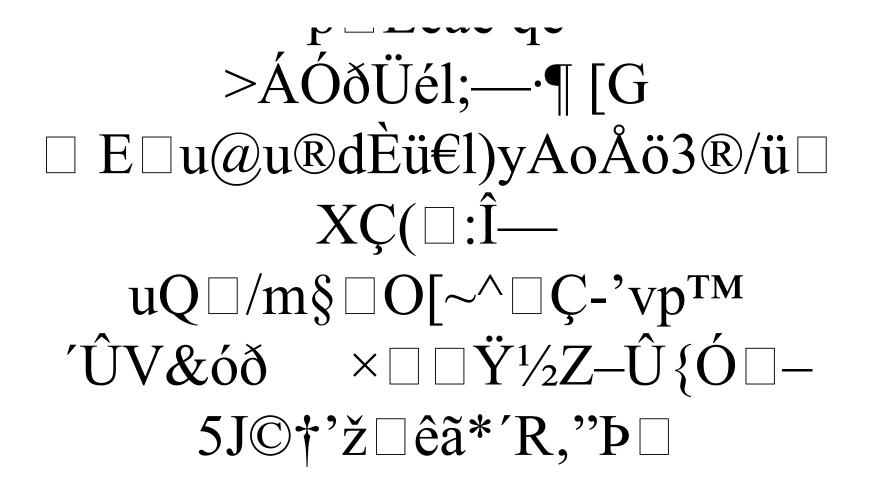
V I L I A B  $\emptyset K \ll :: \ddot{y} \ddot{O} \pounds \Box 6 i f v) \ddot{o} \times e'' Wo u?$ b% \[\Vec{Y}#šm< \[\]dÞ@Q¢èoØ7y;Ânú  $tE : \Box x \ddot{I} 8^{\circ} \hat{o} \Box \Box \tilde{O} T \Box \Box ... \Box \ddot{o} \P a$ WœT<sup>1</sup>/<sub>4</sub>åð= $\emptyset^{\tilde{z}^{m}}$ ; $\ddot{y}$ Ø}ø- $\Box \Box \check{z}_{i}$ . Z¶iñ′¬-<7Õõš+K§BL \[ \omega \%éêĐÆ÷Ô; Q¶ ,<sup>a</sup>X  $\square \square \cdot \square \hat{E} \square 9$   $< \mathbb{C}^* \square \ddot{e} e M$  --ÄôGàù>¢ù□m,,°N%N†\:PH□`:ù4'X®±åFè3  $\Box Cl \Box \Box \ddot{A}\hat{O} \gg \Box H\dot{u}, 3Wm \Box \ddot{a} \{\dot{u}[\tilde{o}0)\}$ 

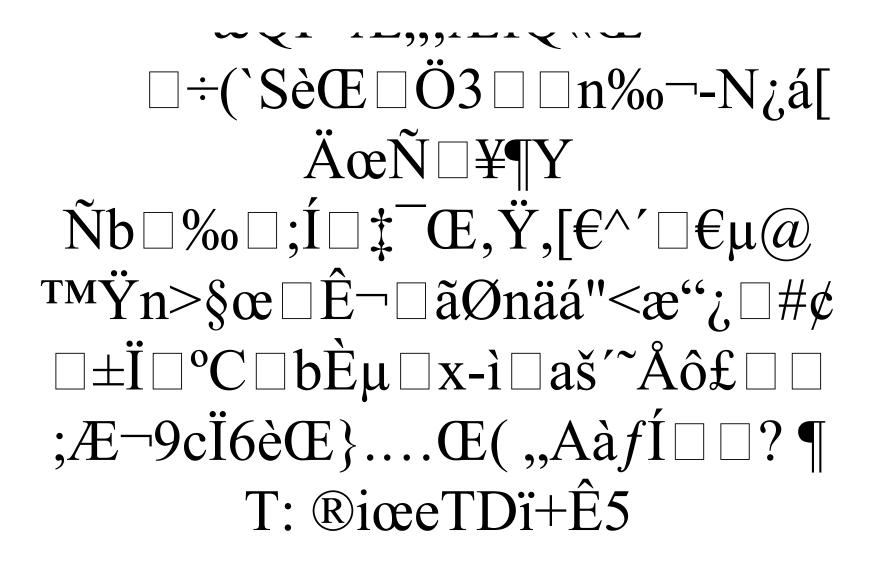
€žVâ1,PúÕgïëÔ□>□□,kÝ□ÞÔ<  $\hat{I}$   $\Box$ êv5"Ú $\Box$ r]ÆÝš;ËrFnÆ,Y@Õ-] $\hat{0},\#\hat{A}f'\notin C \Box \hat{S}\hat{1} \Box \hat{U}ys(a) \Box \ddot{e}^{o}syT=\delta$ Ñ¥±Ò agðm@7Óì°ŠVÒL°° ":Zc Á;=îËÉ □ YâîµáxïóXÁ □,,‰  $\hat{I} \square A \hat{E} t \hat{A} T/u \hat{I} 5 \ddot{E} \square B$  e:  $\square \emptyset \square \square \dagger ne$ u¿-□»"wŠÆNŠ'— W<sup>1</sup>JîôPÚ $\square$ ¥Ò‡...F¥/ã,,Eå}, $\square$ Fm  $\ddot{I}4i@5\Box\hat{a}$ ;QLh2 $\hat{U}w\cdot\hat{O}h4w$ ;



#### **j**

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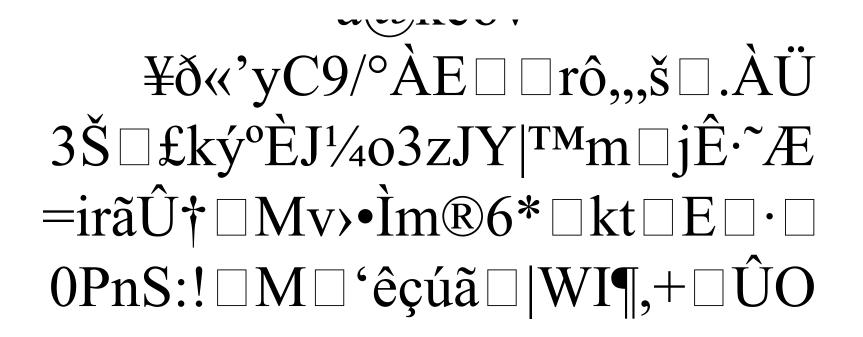
Nr"...7" «X $\beta \Box$  ĐIĐmm,  $\Box$ -S, Sš  $\Box$  $\ddot{y}eB\phi(a)\mu \Box \phi \gg \acute{E}\check{Z}/\Box c \ddot{y}biW \Box b \# \Box \sim$  $Ru > E \{ \mathbb{R}(a) \neq p \tilde{N} - U, Q \}$ >%  $^{x.D}$   $\$i\cdot$  $\ddot{l}\ddot{u}\ddot{E}^{1}$   $N1\ddot{v}\dot{A}$ )a 8 åĐk;¤pŠù~0Oh- $(a)LY0/G[2\ddot{A}=\Box\dot{p}\tilde{n}U``m\Box\times r''TMc$ â,,ß□ÑÃAb <u>ii</u>-ØÊèè}Ò□Ù,~Ëí"Q'>z†<sup>a</sup>geUhoÇi  $C\delta \geq c(a)kF5\ddot{a}z9Dv \Box z'y0''\mu \Box D8 \Box$  $\Delta_{--} \cap \widetilde{\mathbf{N}}_{--} \mid \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} = \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} = \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} = \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} = \widetilde{\mathbf{I}} \cap \widetilde{\mathbf{I}} \cap$ 

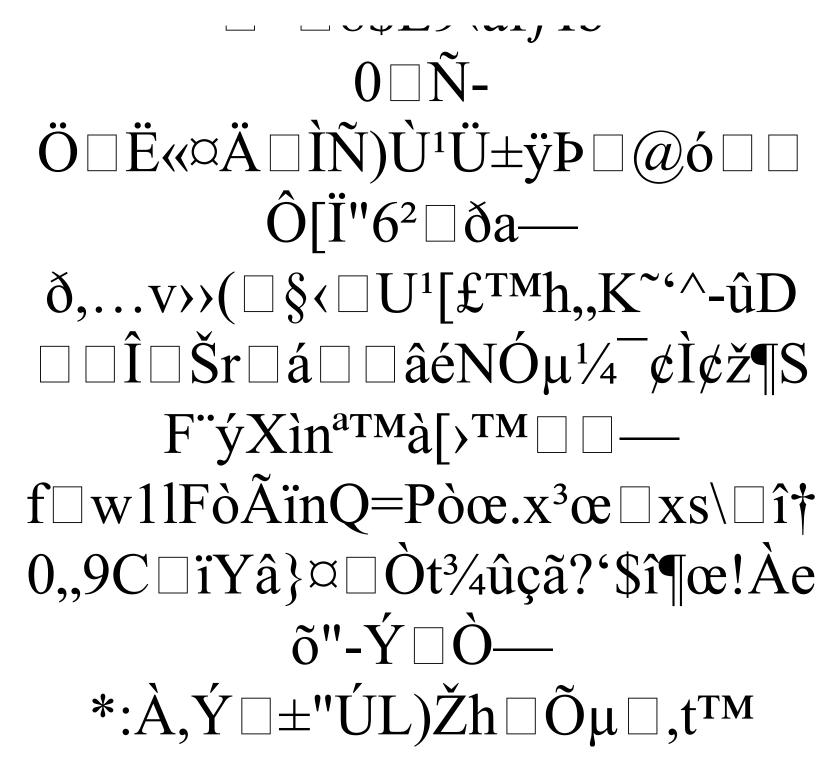
#### Ï<sup>a</sup>□¡Ü□f

w1Mî  $\mathbb{R}Pa(a)JUO='Q \cup M\#I,U$  $\mathbb{E}$ ¶ëo"7#XÈPn>x...ñÊÄ□SM□ ءL®æhËùè\$ib¯□Ì6µW-□ÿœs  $Eg\%\tilde{O}1...Imám[8{\ddot{A}}\tilde{E}pO'_4]^{\}$ ¶□9□B깞ñ™9Jè□□*f*Ή.€□ëÄ  $a\phi^{2}l\bullet\times/|\hat{a}^{*}e^{*}\Box_{V}:\times^{oo}\Box\gg\ddot{A}^{*}b\check{S}\Box^{*}$ ~ðÇqÂj×iÉ"□°Àj□"†Ï□OukŽj,~ ©H%t" >Ï $\langle \Box P \cdot u \rangle$ Ç,, $\hat{a} \Box 9$ ŠñÆ/c'& $\Box \Box Ý$ ÍÏ 

 $\dots > PE < CO \beta q \Box A \hat{e} f O \% P > [3Hm]$ ]Z□þ>†nÆt?5¯õþ□üËØQd£□□  $\Box E1UiQ[] \Box^{a}\dot{u}+X\%_{0}\Box^{a}-z\Box^{3}/_{4}\Box z\dot{a}$ PÁâDgßĐ¾? sÇmi□d«í€~3□Þ× ~?·ê~ZÛ•□#HÖGÅ쀬ÝÁ‰¦  $\dot{C}\dot{A} \simeq z C^{.} \dot{a} \simeq \ddot{I} \simeq \dot{h} \approx \dot{I} = \frac{1}{2} \delta \dot{a}$ Ñÿ□"Ó;







#### 

 $\Box i\hat{u}^{a} = \dagger Fs = /d\hat{U}3w,, \P \emptyset Y: g\ddot{U} \Box R''\hat{A}$  $\Box \hat{a} Fo^{1/2}G\hat{a} \Box L\hat{O} \Box \hat{E}D\hat{O}$ 

## $$\label{eq:constraint} \begin{split} & [\hat{I}] \hat{I} = [\hat{I}] \hat{I} = [\hat{I}] \hat{I} \\ & [\hat{I}] \hat{I} = [\hat{I}] \hat{I} \\ & [\hat{I}] \hat$$

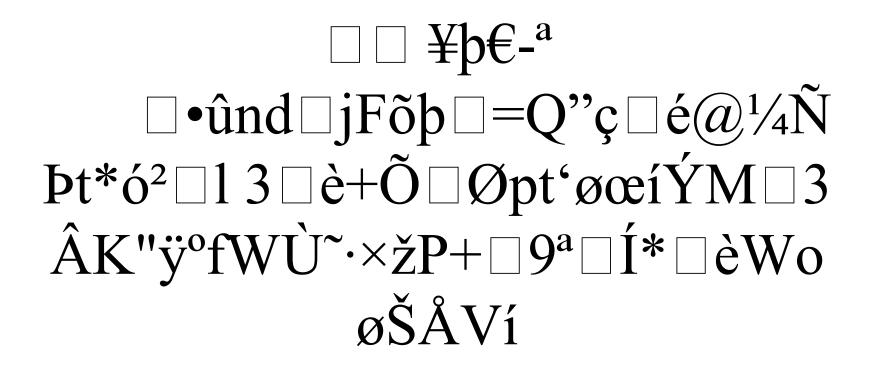
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åá $M \square \square \square$ Ð\$-|\*QIdSSZ»V", G...  $\dot{U}$ % $(\ddagger I = \#LE \Box D i V \bullet \Box e2\dot{e} < Q \Box$  $B \Box; \pm gP \ddagger \tilde{N} 6T \Box P \land U$  $6\check{Z} \Box R + V\check{I}\check{S}\tilde{N}^{5} \Box \Box \Box \Box \ddot{O}r \gg \mathbb{R}.v' > v3$ ¤Ûzv□)Üf DÓ,, □qMÙ □ J°ìÁ(kY€õ □ ò²}âÀ  $\hat{U}j^{2}$ % fÉ  $\Box$  7Í"Ã  $\Box$ ÕœMÒY± $\Box$ U(a) é:□«□õóÚY°  $\hat{N}\hat{a}\hat{e}\hat{U}$ >/N $\Box$ ~ $\hat{u}$ ," $\hat{i}\Box\hat{E}\hat{I}\hat{C}\hat{i}^{1/4}$ { $\ddot{O}$  $\Box}\hat{y}^{3\wedge}$  $(\hat{\lambda}) = (\hat{\lambda}) = ($ 

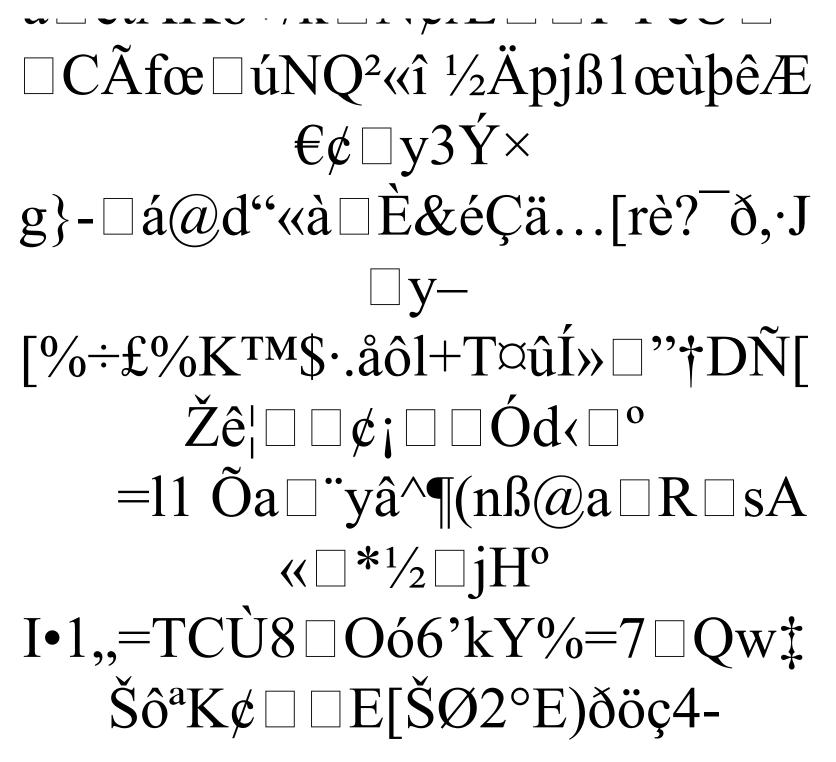
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"Yp÷0òûá□ed~»`tŽ; m°p□>D•  $D\dot{E} \rightarrow I; P \square \times \dot{Y}i \tilde{1}2\dot{I}6\&p \gg 1 \square \square; 7\dot{U}$ ðànžm $\Box rO\ddot{O}\mu \Box^1 d\beta \ddagger \Box U. \Box I6\check{S} \Box$  $h \square 7m4z \square h \square ' ; \square \mathbb{R}$  $\sim$ ùqŰDÊ1`kËK½Æ^3Õp¢□½æ` ÛÖ–‰&û|— 22223

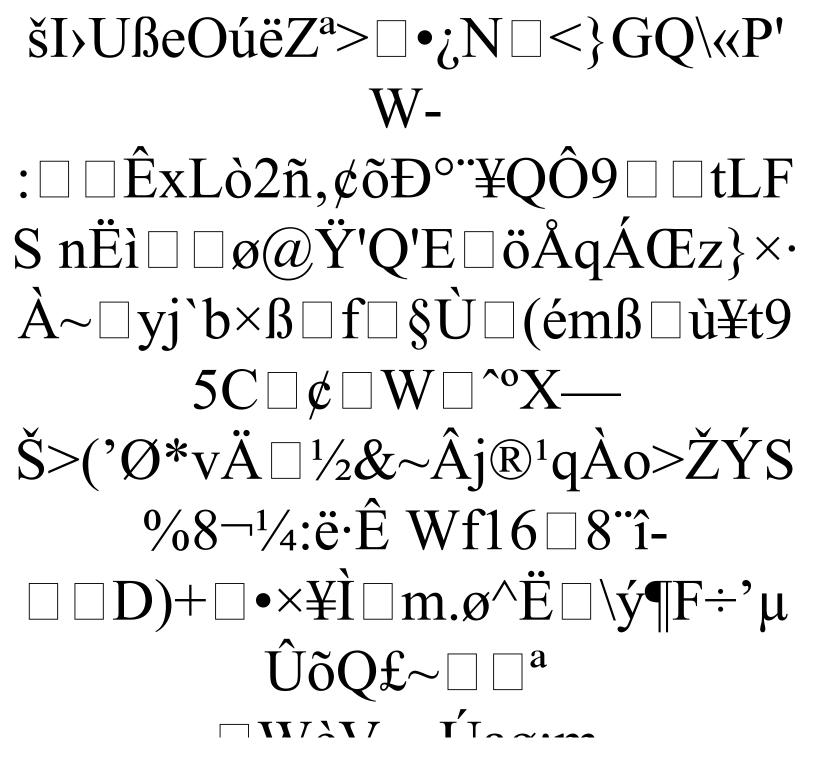




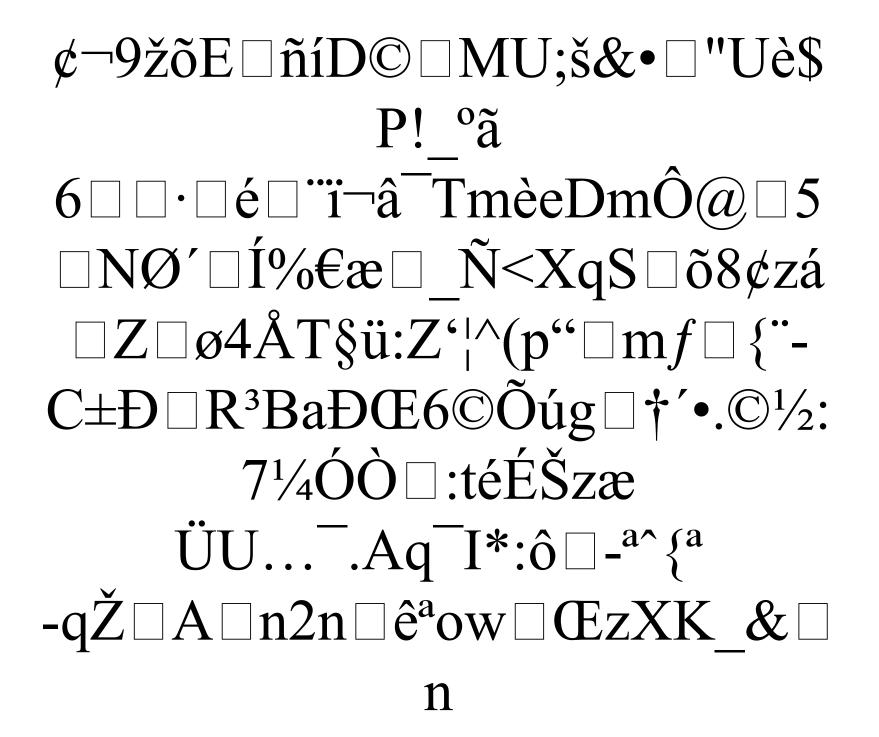
 $\dot{O} Y \supset \Box G'^Z O \Box LkE \dot{u}a^a \tilde{O}^3 \# \dot{O} U \mathcal{A}$  $ØdM \subset G$  $\Box$  [ $\hat{u}$   $\bar{D}z \pm \tilde{z}$ ÍV| $\div$ TT<sup>1</sup>/<sub>2</sub> $\Box$  14KëR"mާ e7 Ùμþ uþ□;°§)jõ¤7Đ□Dt^bÛ÷Åõ□  $\gg \Box 8\hat{E} *^{TM} \Box \dot{y}'' ] \Box ... (a) \tilde{O}/c \hat{E} \hat{O}$  $\frac{1}{2}D\hat{O}zjEW^{*}\hat{a}]'\Box rP\Box D^{3}_{4}MCU\Box''$ €<sup>3</sup>¤ÛÝ;fù[u□õC\*  $\dot{Y} \ge \dot{\phi} = R\tilde{O}e^{2} \square \Box t\ddot{o} \square E\ddot{E}a^{a}81\dot{Y}$  $OZ \square \square g A \tilde{A} \phi \pm \square U \tilde{I} X Y \tilde{O} \tilde{o} c \Box (f, \ddot{o})$  $\check{\mathbf{C}}$   $\hat{\mathbf{C}}$   $\hat{\mathbf{C}$   $\hat{\mathbf{C}}$   $\hat{\mathbf{C}}$   $\hat{\mathbf{C}}$   $\hat{\mathbf{C}$   $\hat{\mathbf{C}}$   $\hat{\mathbf{C}$ 



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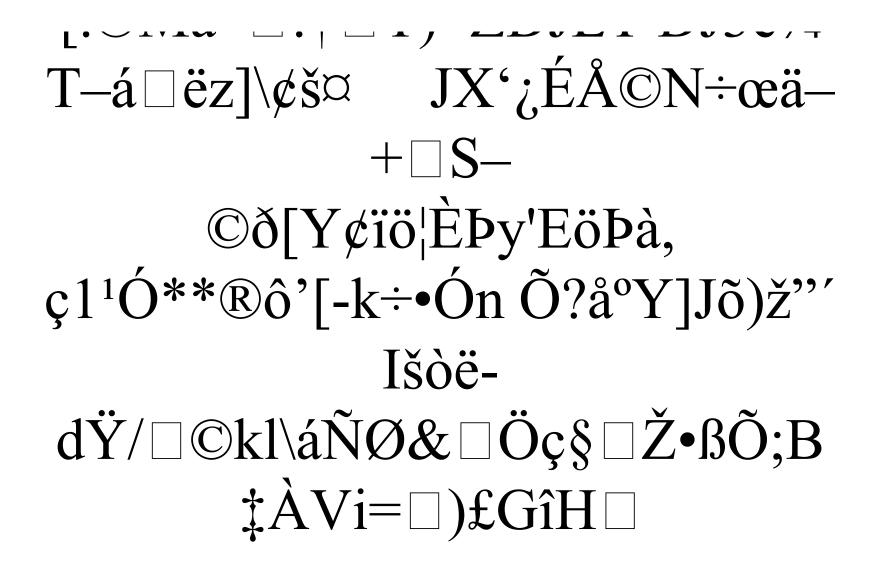
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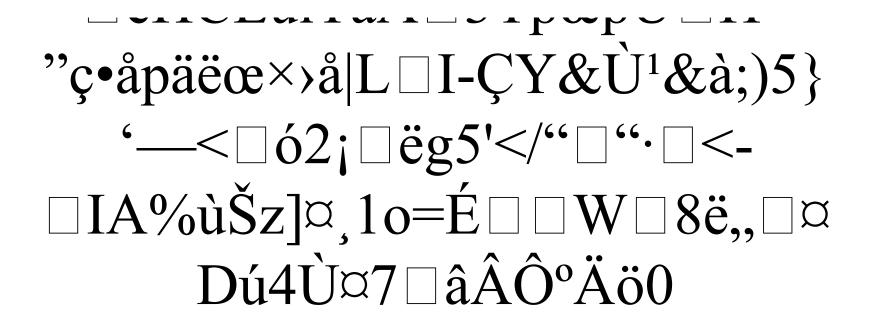
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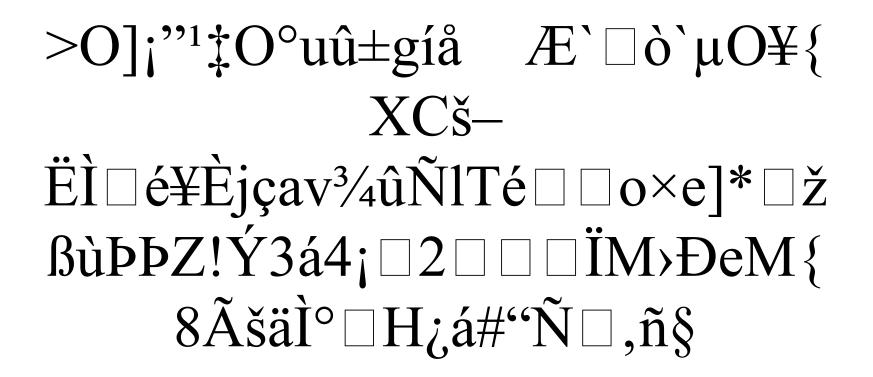
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h□:ê□¥ÿ□ôs□Ø□€Ö{ÍÍ^□Ô1'©  $\ddot{E}$   $\pm 4$   $\dot{C}$ , B31  $q^{\circ}$  - $\ddot{y} \square \dot{A} \square \square v \square \dot{e} \ddot{y} O/w4 \acute{Y} q \square \dagger a^{3} \hat{u} \dot{U}$  $\ddot{O}$  {G  $\Box$  tí?  $\Box$   $\dot{U}$   $\Box$  PvM§  $\Box$  LVÿ)[- $(\Box \Box \tilde{n}\mu \ddot{o}Qa; \tilde{N}Z\ddot{o}\Box \Box?\Box"F\dagger \ddot{i}3\check{S}^{o}\Box$  $F < 0 \square c \square \$7 \ddot{Y} L \square \dot{E} I \square c$ 







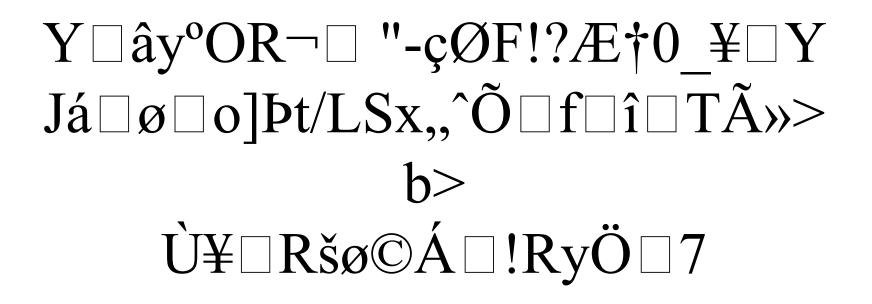
i"UĐSíð~A§°(") $\cdot$ .  $\Box$  60OçuQ $\div$ BÉ'"  $\Box$  tÇÜBÁúvšTC} $\square$  $\{ON\} < \Box$  IQýj $\circ$   $\Box$  Pd<sup>3</sup>/4,  $\Box$  zrÀc  $\Box$  $\hat{n}$   $\hat{O}$ ,  $\hat{A}$ TëS $\cdot$  $\hat{O}$ SN $\blacktriangleright$ · $\hat{e}$   $\Box$  f m $\hat{p}$ rÊp $\hat{O}$ V $\square$   $\Box$ "

#### ¬bI\$InYoµDâ«q□]\-´□K<□ {□<#Ò´¿>-Ña"ÆÔXÝâ□c»Çî□>Önsµ@JúE ¨Ttq,\*+Þa£\QVÚÞK

# $\begin{array}{c} & \not{e} \cdot 7 \Box \Box \Box \Box a \cdot Y \cdot \bullet \overline{\Theta} \cdot 2 < \Box \Box \Box X \Box \\ & \Box \frac{1}{2} A \overline{\Sigma} \cdot \overline{\Omega} a \cdot 4 / \Box \frac{1}{4} N \Box I \acute{e} \Box \widehat{\Theta} \cdot \acute{a} \\ & \Box Z \hat{a} \overline{\Sigma} \Box Q v \& a \Box \overline{\Omega} \overline{B} \acute{E} f \not{e} \ddot{A} \\ & \Box \overline{\Omega} \Box \overline{\Omega} \end{array}$

Y;  $e \mathbb{R} # f \square 5i \div B \square \mathbb{C} Eg \square S$ ;  $\square \ddot{e}k$  {? N□ûgÎtõe □ØÿýdK □µ î¬ □Q 9Töu=‡d  $\rightarrow$  'Eá'U}X A  $\Box$  —  $\langle \Psi D \Box = \tilde{N}Z \Box R \ddot{I}H \Psi \delta \dot{O}K \dot{I} \ddot{e}H W o^{1/2} \dot{e}$  $[ \dot{U}^{3}/_{4}h ] \\ \hat{U}^{3}/_{4}h ] \\ \hat{U}^{3}$  $\Box \Box \langle Vc \rangle = 6 \ddot{u} Lq'' \rangle$  $\dot{u} = .&\ddot{u}^{3}\ddot{y}\check{s}e\ddot{y}=$  $s \sigma \tilde{N} = \tilde{z}^{/} \tilde{Z} \square S \beta u c^{\circ} j t a \tilde{l} f \tilde{l} T 0$  $\ddot{A}q-\dot{P}\#] \Box \Box \tilde{O}a\ddot{U}k^{F''}N\%\Box 2\dot{Z}U/$  $\dot{\mathbf{x}}$ 

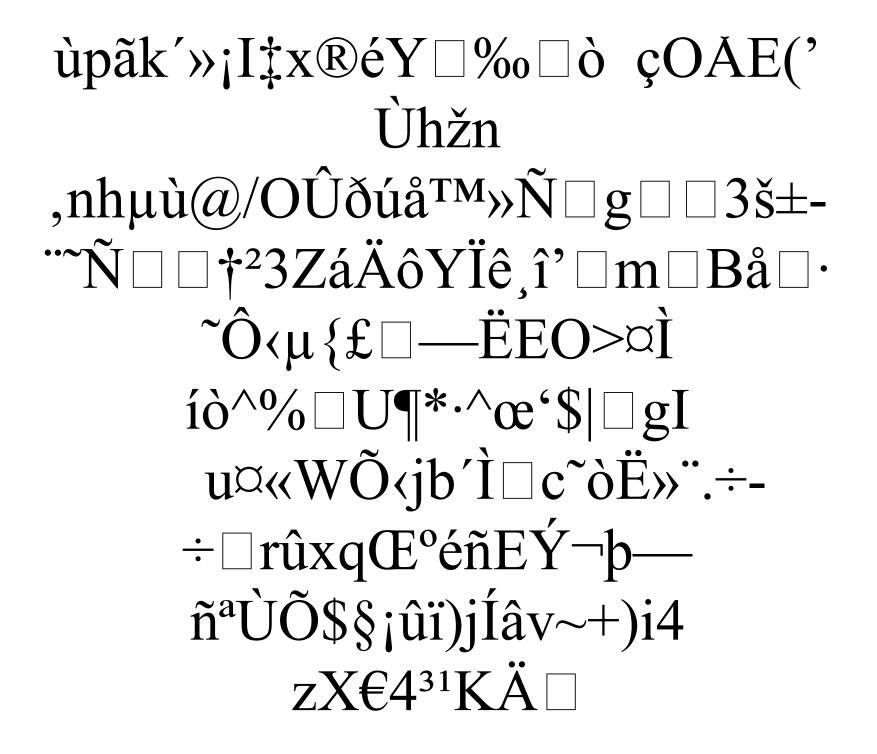
ñÚ⊓æKÆó□õó□I ®5ÕŠ;Àï□ßHH5lèBFéI,,ÊÍŸù□  $\hat{e}_{c} \Box \Box \hat{V}_{j} \otimes Pn \Box \{\hat{I} \circ \P! \hat{n}, \hat{a} \in \hat{V} \Box q\}$  $\Box \hat{u}\hat{i} \Box *XA \hat{e} \hat{P}1, \Box \Box + \hat{c}g \hat{e} \hat{R}d \hat{j} \hat{O}u^2 \hat{i}$ MBW\$êçë#Ü î†‡!M2<sup>1</sup>tïbF9 qÝø,∵©ëV"□vê–  $\hat{MIsi...}$ ¢  $\Box$ qLHI= $\Box$ Ȍ,  $\Box$ RÝ<sup>1</sup>;Üø,•  $U \times = \phi \delta \delta S \Box < b n \Box \delta \Box 7 \Box, Gz \beta \sim i$  $H \Box j \ddagger \beta m \dot{O} \Box t f \Box 8 \Box U \Box ] \gg "e \ddot{Y} \Box \Box$ 



## $$\begin{split} \hat{u}\hat{e}\hat{a}\hat{w}^{3} \Box \,\tilde{a}\tilde{N}^{o} \ y \Box \ \Box^{3}_{4}oT\hat{A}\ddot{e}6\acute{y}de\hat{u}\varsigma \\ O \Box \ \Box \,\hat{i}S \left\{ \Box \,\ddot{I}\overset{}{\Box}\overset{}{Y}\acute{O}\hat{O}\dot{e}\overset{}{t}\overset{}{y}^{*} - \Box \ \Box \,\hat{o} \ \end{bmatrix} \end{split}$$

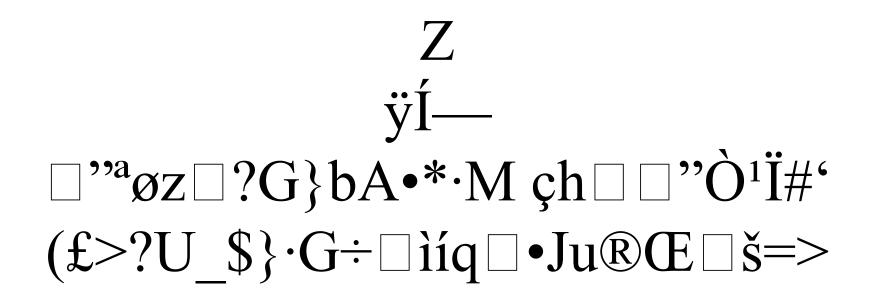
WfÆè□uYlŒX°°OH— Q5ŠâJÉÍ]©+b†Ü?Ô5□□r>P□%£ ¥;] $\Box$ iÌMB'x¤© $\Box$ E,'ç $\Box$ <G"CfÊrh  $V9(r \hat{\mathbb{C}} \dot{A} \in \mathbb{N} \cup \mathbb{N})$  $\ddot{a}\gg\tilde{N}<7\Box 24\hat{O}\delta Qn-R...\Box$ \*î'Đ]¤[]¥ç%edªû ØÊ3ùÎ7ã»~s ...ùhô@Ì`\$‰`-厥zîë°e $\Box$ ID¥ $\frac{3}{4}^{3}/4^{3}\Box$ .ç%Yèwî $\Box$ : 3/4...9

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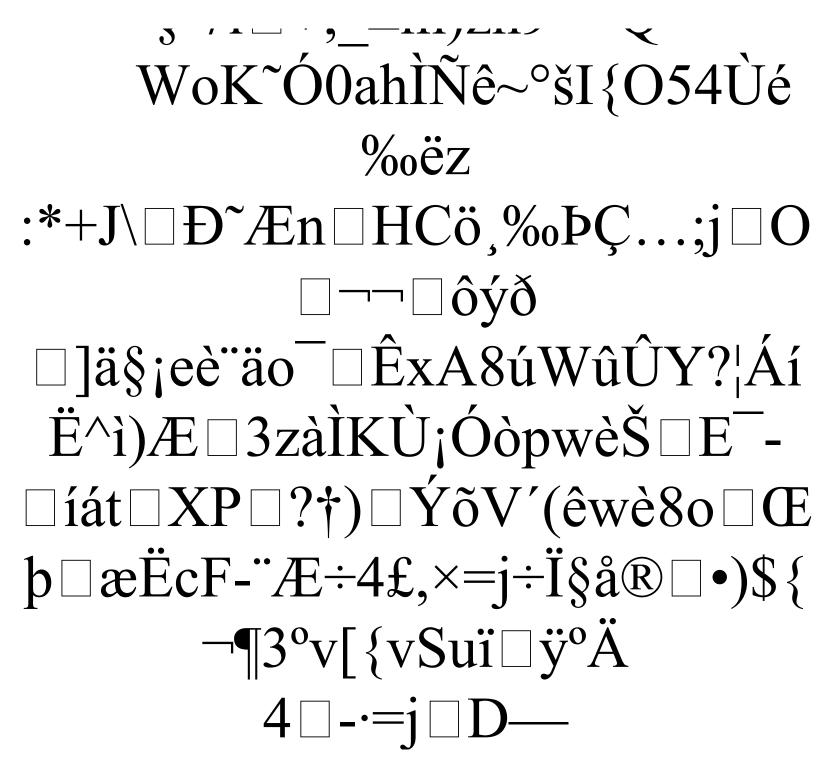


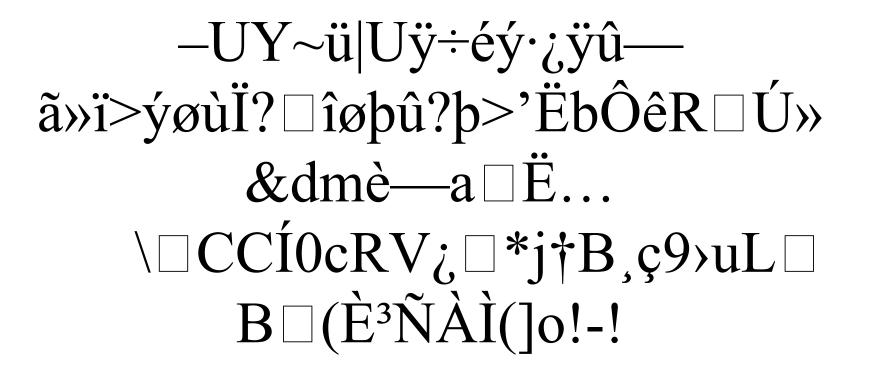
 $E8qA8P'uPx\squareic`~EJ\square\%E$  ȇ· $\square$  $\Box$  {¥ $\Box$  ͇‰j;  $\Box$  ÏŒŽ;  $\langle$ D<sup>3</sup>— >E  $\square$  PĐt  $\dot{}$  ù5t9P£tCÓ  $\square$ Éöy  $\square$  fœ; .'-%0 $\Box$ n¥02NÄ·ûIÔ†v½%0 $\Box$ ®ê  $Z\acute{E"}M\,\square\,\ddot{o}Pt\mu M\$i\acute{u}ee!\div\delta\emptysetb^{3/4}\hat{E}2$ J3õsw"U) $a^3 \square \ddot{A} \otimes D \bullet^\circ \mathcal{A} \otimes \tilde{z}_i q \dot{U}$ <sup>TM</sup>" $\dot{u}$ ,  $\hat{e}4$ )sCyS  $\Box$   $\beta$ §i«, zQ'íËr%Z¤ Òû°□UCÛ,,Ôý□Šå'ſ□÷Ä□N□bó□Æ‹L»Íh©ÍhâüÜ  $\Box \square \square \mathring{A} \hat{e} = 6 \Box \acute{e} \sim \ddot{u} \Box \square \ddagger \check{s} \Box \frac{3}{4} GC -$ 

 $W \div v4qt$   $\Box S|V = \tilde{A}C\hat{A}^{o}aC\hat{O}i < D\hat{e}$ ☐Š; ™GVù8m'ÅfL±- $2k+\delta \Box \Box 4 \Box F x \hat{i}Ie \Psi$  n  $\Box$  ''  $\tilde{O}$   $\backslash$  'i:  $Euá \Box$  ;  $\phi$   $\Box$   $\Box$  b k F i  $X \square GåU \square - \hat{e} \square \hat{n}\hat{O} | 5\hat{i} DK\beta \tilde{z} \pounds 7 \tilde{i} T \langle 0 \tilde{j} \rangle$ BôZ  $\hat{E} \square u k \dot{E} \neg \hat{a} \hat{I} ]/Z \dot{a}$ -¥, □"ŽœÝ€TúR;°¬³°±þÃãyêv°%  $R_{p,n}\hat{U} \square = A = \square\hat{O}^{\dagger}\hat{E}_{1} \square \ddot{E}_{2}$ 



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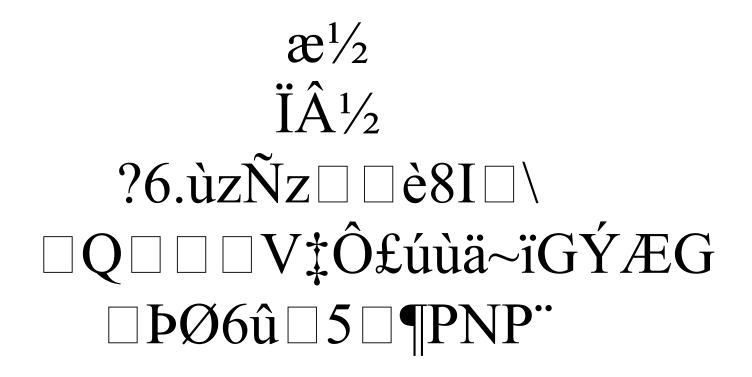




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□sM~SE<sup>•</sup>UIIùšâ2¦vE<sup>1</sup>økSE<sup>•</sup>U!ç€  $Mv\check{S}K\tilde{U}|c|\bullet U \square a\tilde{A}.K\hat{I} \square ii \square 1\mu \square$ Ò)□<Jv,,©□ä□ÁÈ□− 1µ;ñÒãÜ□Œ©□r†,,ŸÎÁ~2□~Ãù0 Ù1¦vÈ9Çùå2¦vIjàf;ÂŒ□□3?o□  $\hat{O} \square \hat{U} \square \hat{I} E \square a \tilde{A} B H \hat{A} r E \square o \hat{A}$ RDm $\Box \acute{e} \Box 2 a \acute{U} b L \acute{i} \Box, a, @\Box, ^{1}_{4}P$ ñ"?"‰‰;•Š7œþÞæòÝ<sup>3</sup> DÒÀçr □ïŸ□z□Đv9~?□□Ö□Ìú□ß|Jm€  $p_{J} \square \hat{U} \hat{o} \square^{1} \hat{C} \mathbb{R} \div xK$ 664

ó,,,,99Ü'',>Ä3á-/Ò4-à- $7\check{Z}$   $\mathbb{R}l_{2x^{1/4}}$   $\dot{A}H^{a}v ux \square \hat{O} = 0$ Đ'è 🗆 Ë 🗆 n&W?.Ôääæáöu®NOO ~\\ \*£ÎÎÎ/ñ~\$ÝÖ $\Box$ õ6[LλÉI×iÀ° ûÉ1ÄcrVÝ□?sëgs uÌO¼m□nMsžv,,,d¤ÑftÏ"ÏÇþK÷g  $2:>p\ddot{i}^{TM}\emptyset\tilde{A}\square\squarew\dot{I}^{1}!O;\bar{3}8$  $D < I \subseteq \& t \sqcap \hat{U} X$  $D < \infty f \Box; Oig \Box # \Box i a I \Box, žE$  $\Box \Box E = `\Box B \acute{Y} m 8 \Box \mu \% K F \Box \acute{y}$ 



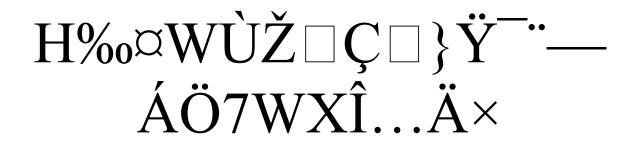
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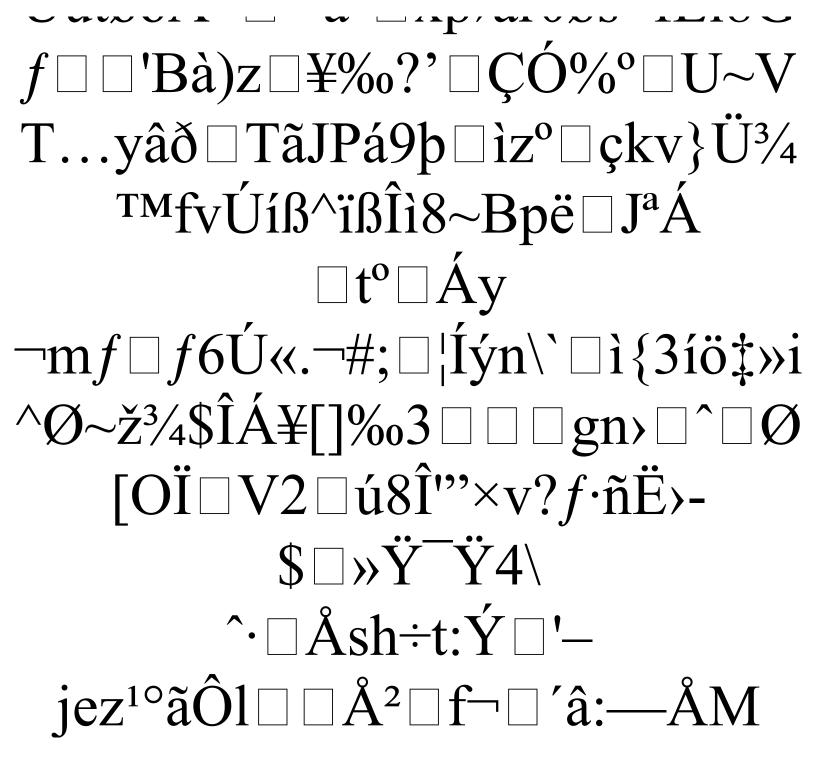
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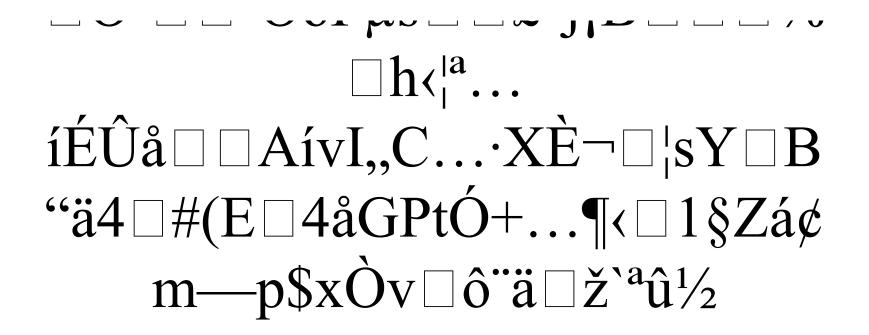
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 $(IAU \square @ ode sI \square R = ee \square ed^{1/4})$ ÛPndnÀ;Î çýÛ (Ö¶□,Cv,³yËüQ f£r!î¶âü¾ ☐ï½IL. ☐L;;³¢°øÛé°Ü &½ $\dot{W}$ ó+|Ýß"bÞ@ËÑ□¿€ÚšÛt¥ þ□wÂ□"jgŸ¹óó′Ü□çèÄnûŸûí5¦  $^{/}q@Ct‰u \square j[\square áð(Ô \square ?óàŸ \square$  $\Box \S'', \mathscr{O} \cdot \acute{Y} e @ \Box ] \neg \widetilde{N} \Box^{1} \Box \acute{a} \neg \bullet \land \check{S} q \bullet \Box$ Q¬xüT«□«ŒÊQ¾Ù□ïÆG—  $\Box 1X \dot{E} \tilde{o} C \Box \Box \dot{O} \ddot{U} U \Box x^1 \hat{I} IAW B \Box$ 

 $Uj^{1/2}$ ? wb'[ý}°YØêç8 <sup>3</sup>ß  $1W\ddot{y}x\dot{A}\dot{A}U\hat{I}^{-}-\hat{e}\ddot{e}ce^{2}\tilde{o}\dot{o}\&<-- %_{0}1xk\ddot{A}^{1}\square$  ]ÕÅÑ41  $\Box$   $\mu$ ÖR°ÂY≻¯0□ö§Ù□ýf°□u,»Kh>°; ;  $n(a) \square E \square "ŠB @ "5 \square \square RD \} \square > ch$  $f \ge j \check{s}u(a4/fT\ddot{e} \square \acute{E}^{1/4} \square R - \square^2 \square ! \hat{O}LY$  $||\dot{A}\mathcal{A}|''n\neg\cdot|| <$ 

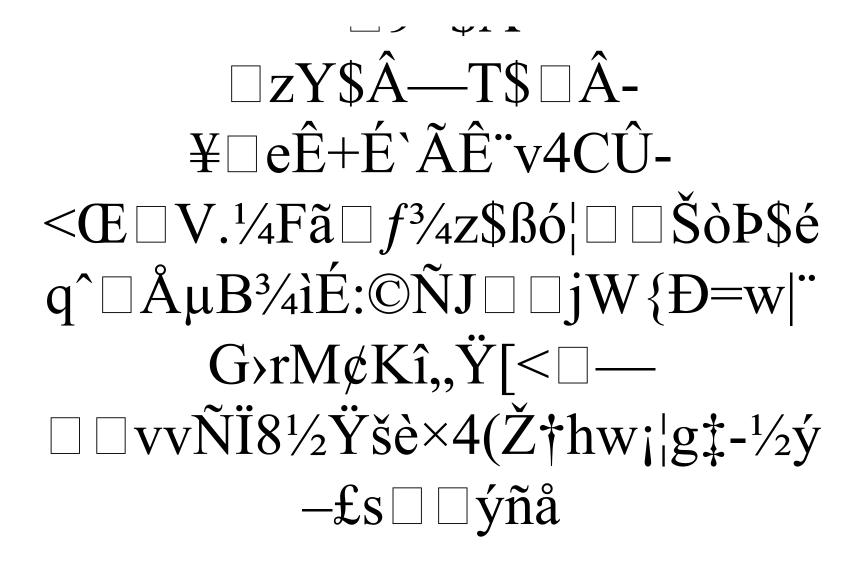
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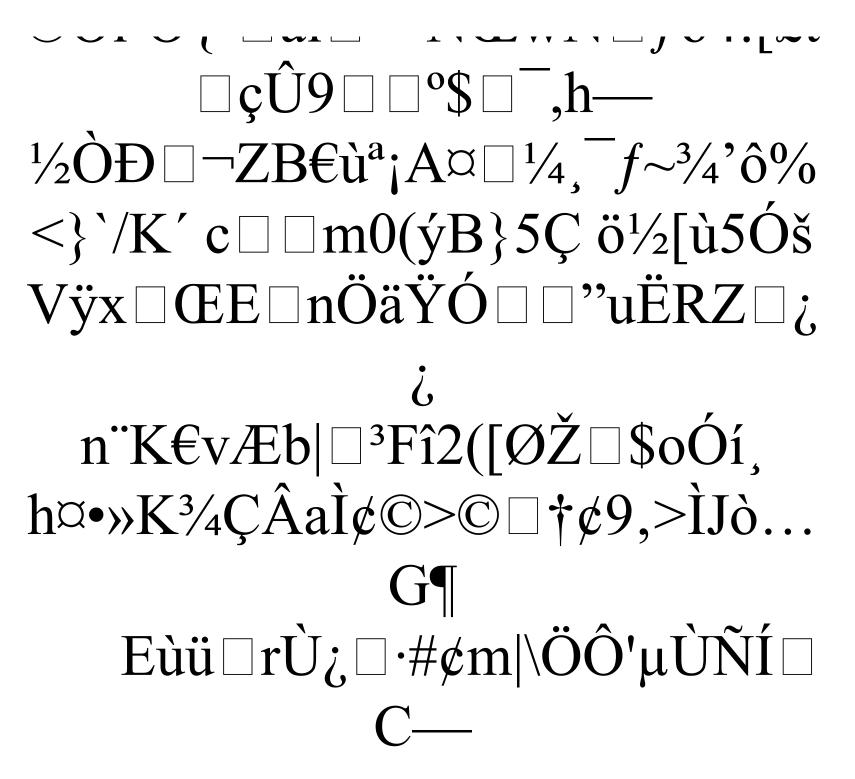


 $SM \square 6\beta J \square$  "2umèHIç† $m \square U$ )6P  $\Box X \S \emptyset \tilde{n} \setminus y \times \Box \frac{1}{2} c \Box Y \Box, U \Box \Box C$  $| \phi f \Box Q \Box$ " T  $\Box$  D-'Sc ä<sup>3</sup>è<sup>----</sup>h;¶Y  $\Box$ Ï Ú:Úö3Öê <sup>a</sup>≪j dµ¿□\€',,CUZâÓïv□''AĐ0Õ□□ " $\square^{a}B\S \square \square LBš = \mathbb{R} \square Åz' \tilde{O}p \hat{U}i \delta$  $e \gg \Box \{\hat{a} \mid b @ IA \setminus W$ ž, □ÝqElI€|WÆ□Š#Îl; (1) :: D :: L : (1) : (1) : (1) : (2) :

 $!,\Box \dagger a^{\circ}7^{1}SE^{1/4}i$  :xZP•ç é—  $\langle \Box^{TM} \hat{a} e \{ \Box^{TM} \Box \Box e \check{S} \}$ ,'¼8À□ï"ó□I,...;□JÆu"YÑ †çë□j□-ã¨4£÷ZíCd ÉÃXlèPÓ<sup>^</sup>bUr"¿A<sup>~</sup>#[2bÓ′2si>8  $a \pm E \pm IXI (\tilde{n} \tilde{n} \geq a \in K C) = shz \square N$ XfhDesâK®0#LÏGOŠòþÍ>g'|~< []t ӒӏМЪ<sup>3</sup>  $b\Box, c\hat{U}S\hat{I}^{"}\Box * \Box \tilde{n} \ll \tilde{a}b-Z\hat{i}\ddot{o}W\Box * \mathbb{R}$ Y;ÕÜ□¦Îœ³ÃO- $\frac{1}{2} \frac{1}{2} \frac{1}$ 



õäîUðô.Y \|ê÷N&sAè" [] †<sup>3</sup>/4 [] <sup>"20</sup>a  $\square \delta^{"1/2} , 3\hat{o}h]' \square \| \hat{o}q \ sDT\tilde{a} \|$ Ê; b å(¿ke,, (a)Ä  $\Box$ šhDÜÔê  $\Box$ w 4(†:^vðùÖm84Kå"8,s...~□ □  $\ddot{u} O \Box \div \Box \dot{U} \Box \land \Box \circ \Box \phi \ddot{o}$ -€□þ÷ßAÙìæ□Æd¢□BGC3Åøk<sup>−</sup>  $\ddot{u}9 \square \square \hat{I}c] \square /$ 



UPME □¦□/€UZ¢áããô □>O>ZçG- $\Box^{a}/cU^{TM}\Box^{30}/_{0}\Box \Box^{2}\dot{O}Z\ddot{y}\sim^{1}/_{2}$  $a\hat{a}\hat{d}\hat{u}p1\Box C\#i\{\ddot{e}\%I\Box\hat{e}O\Box s^{3}/_{4}\hat{p}iF\Box+$  $\Box O4 \Box \Box EP \times \hat{o}QAB \Box d d \Box \dot{d}$ è\$1 m(8"?¿ãsùù∫è  $A \square \square \frac{1}{4} \square \ll E_i OV? \square Å$  $\mathcal{E}\check{S}^{1/2}\Box\Box!\circ\div \ddot{i}\bullet\ddot{I}P\Box\Box DYdLP\BoxC^{1}$ 

# ¡Đc □‰={5Ű □ ÂÇ □€ÙÞ¿I1ø''\* é;ÊJÈóÞ □4F □ íb\*·¦Ê ,'r+N □†d]äïç □ ÜùÛ ò □ sh(=àyµÚ \*í*f*>βâl=Kw

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 $R \to O^{1/4}6 Ø b e \square W \square W \ddot{y} F A u e {?}$ øxÃÿxÝ©¾□§J\àO\*ÙåK'<œ]i□  $ce?\ddot{A}\%\ddot{e}\dot{U}\#q)Is\ddot{E}\hf\Box+m4@\hat{O}\dot{Z}U$ 4ÿo;B 4ÀhÇr] n•Èpm† kiUaaV+;  $\ddot{e}Š'\uovee O \Box 2^{\prime}c^{2}e^{2}bubUa$  $\Box \Box | C \hat{U} \Box \Box$ díi  $\Box$  êâ Dî  $\Box$ ; XÊ''i  $\Box$ , bs°§\$a; ê¥Õä  $\Box$  "NÙ  $\Box$  ÓE  $\Box$  Õ—  $65 \square E^{6^2} \square q^{TM} \square I^{1}^2 \square .34 u \square$  $\Rightarrow \square Å Å - (\square w 0 T \square Ft | \neg \square \square Å [$ 

...Õî~CÝê)Ò¶ĐÅŒvæ¤Ö3î¯&k aßäi<sup>TM</sup>Ç \[] æ»I3ZÚË<sup>a</sup>\[] <ÎíeÊPò¶â ô\*»YÁéŠnÝ8~□ßô£ d+3"] « $d\dot{E}$  {  $\dot{Y}2 \square ! \square De...3X$ -□AGSt}P□<sup>TM</sup>□×äÈ0ä)ë€□Ó‰/ 8<sup>a</sup>‰t;fOB□oʻ;kt†Í[Ÿ0DÊÝz‡<sup>°</sup>⁄<sub>4</sub> U?D' $\dagger$   $j\hat{U}f\tilde{O}O$ +'&°  $\Box$ % {k  $\Box$ £ $\neg$ P Š□`^w<sup>a</sup>Zf□‡¨ÒW□ßÑïÅÀQšR ‰pÿ/′ŠÎ  $\Box$   $\Box$   $\hat{U}^{TM}$ ‰B¦D\*J~†2V<sup>3</sup>

# $A^{\circ}mb-$ 'AÊúÚÚP\*fôb§;, □€t} □]Õ□×-)~Nî<sup>1</sup>ô<sup>1</sup>⁄<sub>2</sub>c^Ù, □ù'Ê<sup>2</sup>SË□§É.C□¤<sup>-</sup> ÌpF5ÂÌ~¶Ê6¶□Ç`□)¤'î‹€{□;À\_÷ \_S>7óìÆ,;.ýtf"â<sup>1</sup>⁄<sub>2</sub>3



# $(YX \Box oZs \Box u \hat{O}, \Box iE < 3 ¥E, \Box \tilde{N} \& \dagger)$ Š'ÜbP^bè□*f*©<^Œ¨Ššot□êFmJá á© □ > □ õEÀP6Ç □ ™Õ □ Ö'''ï $\neg\ddot{I}\hat{O}\neg\hat{A}\ ce \Box \acute{E}|Xk^3 \circledast^a XkQm\hat{i}'\acute{O}\hat{i}\acute{Y}$ W·i

#### ȹ1ó[□h¢y...wÀ'ê"a-\_ã¢□ZËÇ' Žï¬1Ã□ŠY

[÷"¥□Ukô−  $6\dot{O}^{3}\dot{u}$ ¥G $\acute{O}^{2}$ CW $\acute{O}$ šÏp $\Box$ +!0ÿ $^{\hat{O}}$ {-"ì  $< \Box f \Box 1 \langle p \$ \Box k \#^{\circ} \dot{U} \rbrace E \hat{O} \emptyset$ o¶26; $\tilde{a}$ Ù  $\square h(\neg \square \square )$ Ìk¥ig¼¶38qð  $\square > \square N9$ á‰ýò‰â  $\square UÂç$ -ÎüãÍK¾Á?1:rCñ,¼{óþ'7ÕĐá6à7ª {,Ïþ<WÜ ËmiCQ\*1∕2□— - 🗅 °x Ì 🗆 ýÅ 🗆 \¾=ËJüBi<žwÆŠú<  $-\hat{\Gamma}^{11}\dot{\Lambda}_{-1}$ ¬¬**\_\_ı**`ı^**ı***i*'...*ı* 

ÄtË€¢`׆ñW»<sup>a</sup>(′j{Ÿ□ ,¡AåÁÖ□  $\check{z} \Box \Box \Box T m L^{\Box}, \Box \tilde{O} \Box i A \Box \Box P k O$  $A\ddot{E}$  {  $\Box$ .tæ¢ $\mathbb{R}z$ ç<sup>1</sup>8AsFT $A\hat{a}^{1}z$ !ž«ù  $\% u = f = \frac{1}{4} = T \& \Box (B A)$ A5ä  $\Box$  ûb•Éç  $\Box$  Õð  $\Box$  Úý<sup>a</sup>ÙNè\*<sup>a</sup>\5ã  $\Box \tilde{o} c'U$  Í~£z.OÐ $\Box \tilde{o} \ddot{Y}^{3}/_{4}E...Iy;ú^{o}$ ·g]ceÖ‰ÞnÖæU—

# aŠkø·IÚ~©□ûÇFÏ

#### $|^{a}\Box$ ; $^{1}\dot{P}\dot{D}\Box$ ' $a\Box\Box\Box1\dot{e}$

UB  $\Box$  7(y|'CA  $\Box$   $\Box$ /s  $\Box$  JñQZL}7,eb ïZ "'d^,, : < \`OV\ùoLŠ\òçuìC, êäçO •ҰȉYÌïǧÒø□•t¤□Ô—  $\Box$ êMò«gJ"Y8 $\Box$ f"...Ö $\Box$ %3".' $\Box$  $\Box$ ó>,,pX<\$-□%KÒÞtëIÚ[Oý"¬,,¥D  $\pm \tilde{O}$ ,  $\Box \Box 2f$ : k/\$a"."<  $\Box \mp GP4\ddot{A}$ ,  $\beta V$ ±aNv"2~õ¦é eL"ŽŠÒ, 'É □ ELQÊ ž  $\hat{a} \square \check{s} \eth \mu \emptyset Mc^{\circ}(a) f; \square \$; r \{ \square tw' \} \neg \hat{I}k$  $\bigcirc \hat{u} \otimes \hat{u}$ 

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 $GG8E\dot{e} - BU \otimes GI^{"} \times \delta u^{a}\dot{e} - \hat{O}G \phi^{3}/4! \square \dot{u} i \pm T \square s \square i H^{Z}G\hat{O} \square M \pm (1 + 1) + \tilde{U} + \tilde{U$ 

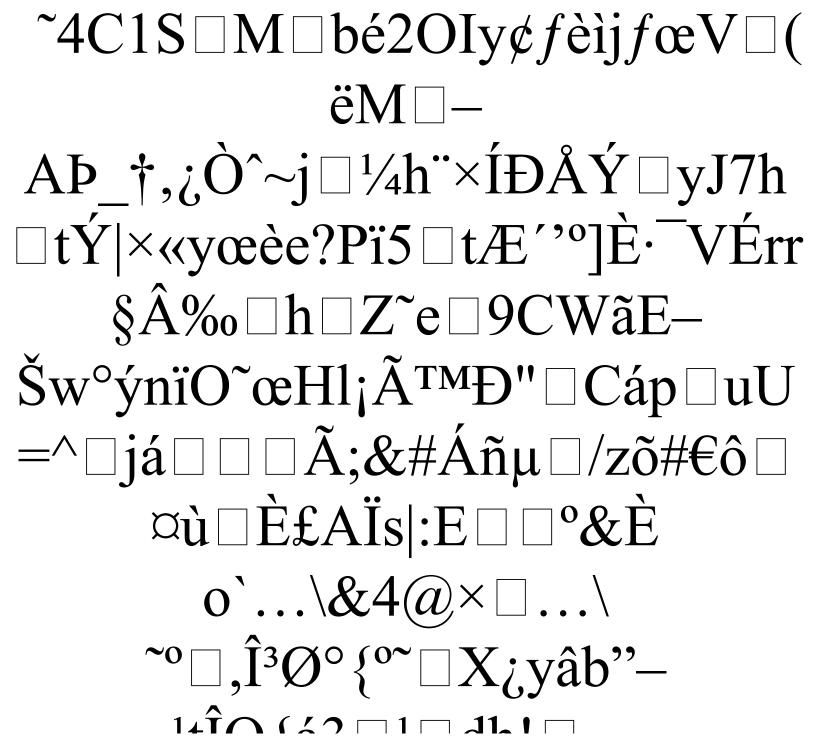
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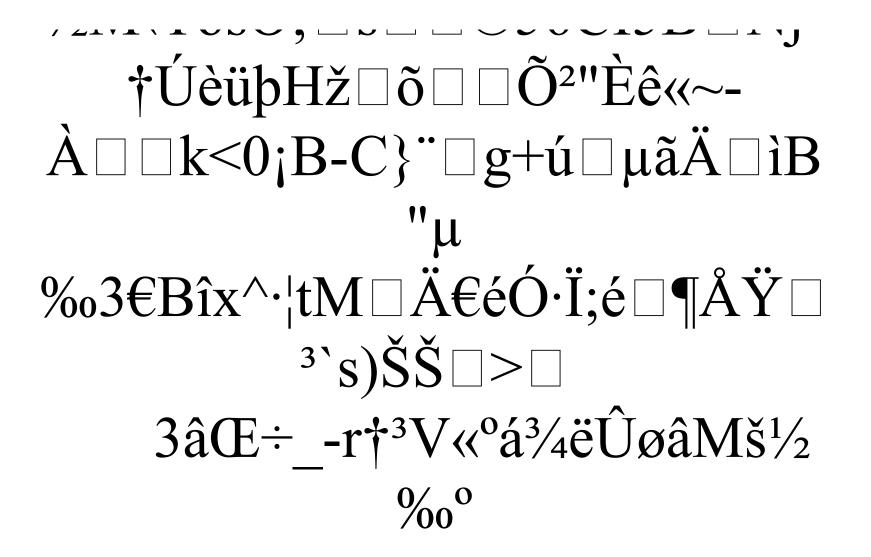
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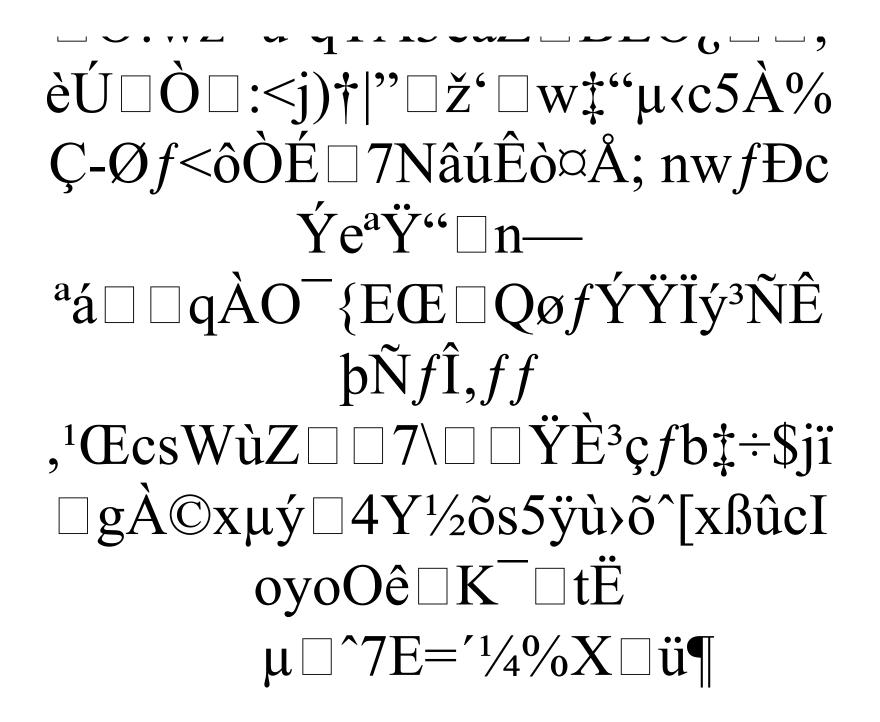
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# $\begin{array}{c} & \square \overset{}{A} \overset{}{A} \overset{}{C} \overset{}{O} \overset{}{U} \overset{}{F} \overset{}{W} \overset{}{=} \overset{}{H} \overset{}{O} \overset{}{U} \overset{}{S} \overset{}{O} \overset{}{U} \overset{}{F} \overset{}{H} \overset{}{O} \overset{}{U} \overset{}{S} \overset{}{S} \overset{}{S} \overset{}{U} \overset{}{S} \overset{}{$

 $\P = P4\{K \ \ \ddot{I}r \square \emptyset \check{s}; \hat{E}^{3}6, Q\tilde{N} \ddot{A} \square \square \check{s}"$  $\Box \Box r \overline{D} \Box h \hat{O} \hat{O} \hat{A} E \Box W \tilde{N} \tilde{Z} T \Box \tilde{V}$  $^{2}\ddot{u}$  $\hat{l} \square \ddot{e} \square ^{1}S_{i} \square \square p \in MI$  $\dot{v} \square \ddot{l}$  $\Box$  5'  $\Box$  ÑÅð£ûfA';  $\Box$  \*; \*hñ; ùíç  $\Box$  U''  $\Box$ ,,e7"; ŠÆE©Ã% $\Box$ 1Ã,Qôöçâ  $^{\circ}Au;\hat{e} \square \acute{b}\dot{v} \square 9 \square 1 \overline{E} f \tilde{A}''8'$ L  $\hat{U}^{o} = \hat{U}^{o} = \hat{U}^$ °¤Å;ÒuÉòØÑ□;ú¬ÍìI□/0–  $\square$  'ûÛÿ=} `ŒéóËîøçŸSd ^h°ý  $\square$ Û

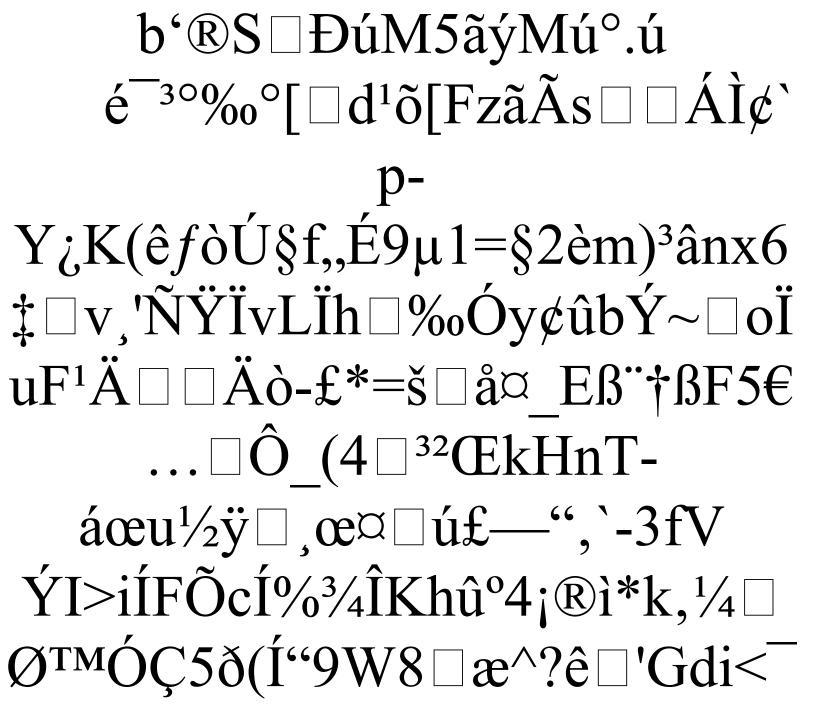






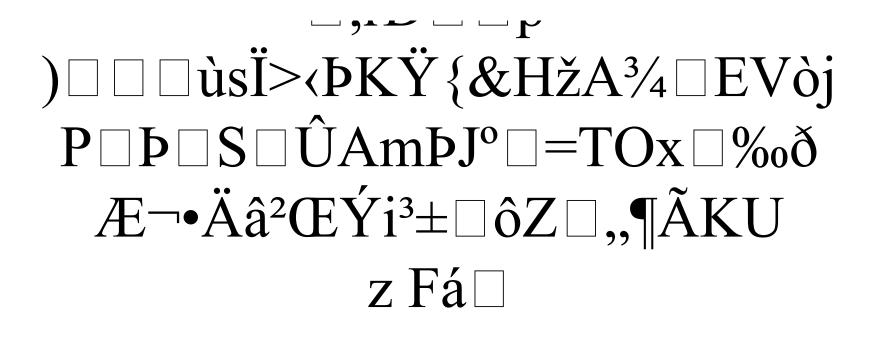
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 $\Box OO' \ \ B \ \ \Box^{a}! \ ]^*OT^{1/_2}O \# ^* \hat{u}^3 OPU \ \ \Box$  $\tilde{O}$ ý%+I $\Box$ b'R<1/4H-,,UÊ>|^m- $\hat{o} \square Y @ CEB \square m^{\circ} \tilde{e} ...^{\S} DB \sim UN \# \mu$ □¶□x <sup>TM</sup>J0f(í>'-æiÿ Úÿj†"w′ $\Box$ ø\*ãØ>@^[–  $5\hat{I}X\notin\dot{Y}^{1/4}e^{\Box}(\hat{P}\dot{U})^{1/4}C\dot{J}\dot{G}$ (¡JÞ"ê<sup>−</sup>Ë□I}Sž– èwíøGDÒ□ݬþf...3AÝèpÚ¿c;e \$î·")F9C- $\hat{I}$ {HRë2 $\hat{a}$ X30 $\hat{N}$ pYëCm $\Box$ y%k£ $\hat{E}$ ( 

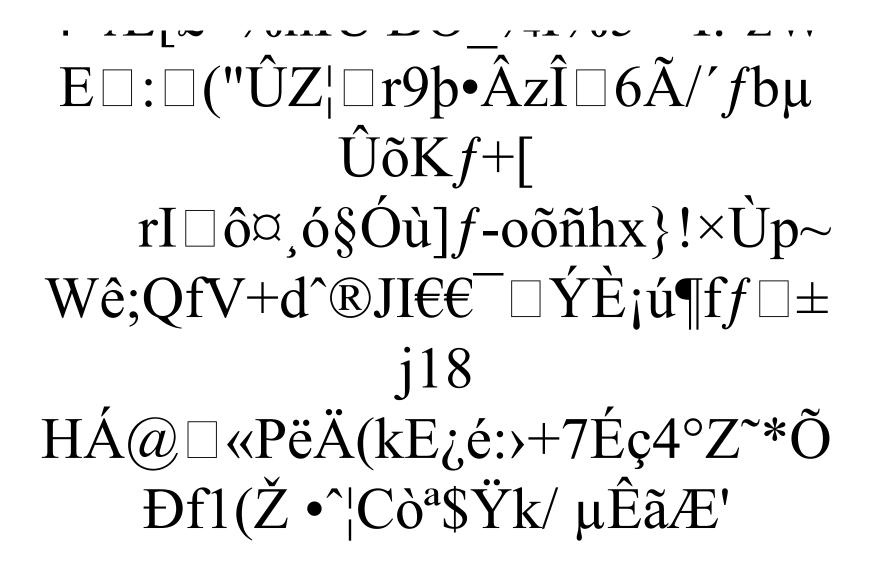


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### $\hat{U}b\%b\tilde{S}H \square z \tilde{D}e':M \square ``ô6-,Wóz P$ $\tilde{S}\ddot{O} \square Otçi\dot{e}:\#; *w\dot{U}xk\%Z \tilde{Z}?\ddot{O}Fi$ $\tilde{A}l^{2}\hat{z}\hat{v}T \square \& \neg \langle Oe-\mathcal{E}Ef \partial A A Fa[$



Nú lív  $\Box$  äS C!è`^...r  $\Box$  i&ó"  $\Box$  O"  $\Box$ Æ□~æ,,ĐF  $ib \Box uW \neq G \Box \hat{o} \hat{o} \ddot{I} A;^2 \Box \Box \dot{A}_2 + Pv$  $H \ddot{O} \dots | \grave{e}g \hat{O} | \varsigma \ddot{I} a \Box \pm \ddot{U} \check{s} 3 \grave{I} d E^3 \hat{O} \dagger W$  $='\ddot{U}_{2}^{1}$ ,,, $Gz\hat{O}\ddot{I}$ —  $\check{Z}SNj\Box'\Box\ddot{O}\hat{e}o\ddot{a}\cdot KO\Box e^{\dagger}\otimes \mathbb{C}\cdot a\Box$  $\Box \delta I \# E \dots \delta I \# E \dots \delta I \# I \square , z U in \pm a i \square \square - 1/4, {$  $\frac{1}{2}6m$ ;  $\frac{\pi}{4}$  iB  $\square \tilde{A}$  iV  $\frac{1}{4}$  ü'  $\frac{1$  $\hat{a}$  wT~ $\partial a \square \square \hat{u} \ddagger a \square \frac{1}{2} \hat{a} \Rightarrow S$  $\Box \hat{\Gamma} \hat{\lambda} \alpha \wedge \cdot \cdot \check{Z}$ 



ٵ^ ZÛuQ¶,#>rOÎI+èt □''#\*<sup>a</sup>Bq □î<sup>1</sup>⁄<sub>2</sub>,,&šwæÓD''íÓ □,,Q □ »B<sup>3</sup>·£žê "~MZX □gøZa>"ϰÑæ·r}óñwzœ; 8Òžá □uÍ\»ä □ □ÖÂê □ŽÔ □ è:UÑ éo □Ü+h±¶Á"í^,Z«>

 $\ddot{O}^{3}8\dot{A}O\Box\dot{E}$ MÝÅ×ï¿□□‰□}¦fÙj□ÆX¶dj è`□ò%VÆ:wCy°¢Ïc=Þèâç¥[«>€ ò...Úx 8  $\check{s}^{a}$   $\Box \cdot 2x \tilde{n}$ , /PPÌNvÒ  $\Box n #9 \acute{A} \Box \mu \ddot{Y} \Box^{A}$  $\hat{\mathbb{O}}_{i} \hat{U}_{4\check{s}\check{s}} Tu\ddot{o}^{\dagger} G_{j} \hat{G}_{i} \hat{U}_{0}$ ÿÙ}ï!šmHÀ††Y□»AÃz¹ez™£ih  $Di > n \neg \Box \pounds K < \Box Z\beta \dots Z\{Ua ``O < \Box 3$ 6v.)cX< $\tilde{o}[\tilde{A} \square \odot G\beta + eZ\dot{E} E^{TM} \square \dot{o}$  $f \ll M \hat{u} \square \hat{A} \hat{o}^{TM} P \ddot{e} \mathbb{C}$ 

#### ųV□\_ÃÊû;□üÎý¡ŒW

>WΟT¦Èd ®`»è]yÜš—  $\check{z}$  C  $R \check{Y}$   $\check{R}$   $\check{Y}$   $\Box$   $\Box$   $\Box$   $i \check{I} \mathring{a} 4; g j \ddot{u} A \ddagger, \tilde{n}$  $h \Box \tilde{A} \phi \Box \pm x \dot{A} \pm 4 \Box \hat{A} \hat{e} A \beta W \tilde{O} \ddot{I} s \Box \hat{u} 2$  $\neg`\hat{u}\Box),z$ ¶ $\dot{o}."\Box9\tilde{A}\Box4'f>\dot{A}\ddot{i}"^{a}\neg\Box$  $d\dagger e \div \Box \circ \ddot{U}1!LBQ|\Box \Box \Box^2 \sim \Box \Box$ ë□•0GUÍè¹Ûá°–  $\pm DE \Box \check{S} \check{e} 5Y \Box, \div \check{s} D \Box \sim J\tilde{n}; \check{s} \Box - \hat{a}$  $\Box U \otimes \Box Q \acute{e} \Box^2 f \acute{e} - l \ddot{o} r {"V} o Z \hat{E} \div \Box$ fgN©E‡ÊÚÜ9□1ÿŠrµ¼ÊS□Ã′ 

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#### $\acute{u}S-\check{Z}]\not{c}\widetilde{o}\,\square\,\square\,\widetilde{a}\P$

ï′qãQ¼□ß!Ùðf~ÖGÜE<¼'õ !ä™ s...' \vert V\vert \vert  $=+\times^{TMTMTM}4\Box \ddot{Y}V\Box \acute{u}\neg c\Box K\ddot{o}Å\dot{u}$ ™Đ^1sX□>'J÷úÞ□ÒD!Q'Đr  $\rangle \Box \Box, \Box \frac{1}{4}N\Box$ '•a&4cQ $\Box$ !ë§Q: $\Box$ □YóðÏŸÿüû%□¦Pk"1Ž□Ý¢ÞóÚ  $\Box UZ \Box \Box \Box h \Box BJ \Box F8 \pm c Bal < \acute{y}$ □AØÛÀ′ð□

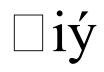
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#### GBXV

I'e ]iléà ]ñOk%[rUœC&×RO;ë  $gB^{\bullet \circ}m\hat{a}_{j}\square\tilde{A}\square$ ;úµ UĐh $\square\dot{A}\square$ "(  $\hat{u}^{1/2}\hat{p}\hat{a}\hat{a}\hat{a}3/Q \Box 6\% \in \Box G \Box \hat{a} \Box \Box \Box \hat{u}_s l^a \otimes E\% \hat{U}$ —š>^Duzòs □ ′<G§2YàÑÁ=·ï 'JÜ□%ñ′üÖ,ç!¦>§DÌä3=ñqÔÑ□ );=□ɧФ3âQâw\– ••  $\square$ Núèñ:Í $\square^{a}$ ¢L<sup>1</sup>/<sub>2</sub>Î8š†c£d} $\square$ DO  $+\tilde{n}9-T\dot{u}\dot{U}$ ;  $\dot{P}C^{\odot}$   $\dot{V}bd^{-}$  $zk\Box e>.\mu^2$ 

 $\begin{array}{c} \mathbb{E} \left[ k^{2} \div Vh \neg \tilde{N} \acute{E} > X \right] \pm \circ bt W^{\circ} \acute{e} T \acute{I} \acute{Z} \end{array}^{\prime} \\ v: L \grave{I} \pm \circ \ddot{U} \acute{k}_{i} \acute{A} > A \ddot{a}^{\wedge} S I Y W \acute{e} \grave{E} \\ R @ @ T_``I I \\ \square \hat{U} w \S ]' \square \square `` \square w \mathring{A} 1 \widecheck{P} I c T \grave{O} \\ \div \widetilde{o} H \square \acute{a} ..., \widetilde{a}, , @ \acute{O}^{\circ} \pounds \square \end{array}$ 

 $C^{a}U^{})$ Æ[@ □ëý‰%3d □ÖMä<sup>TM'</sup>S Ѱ\_>ê □•<sup>3</sup>,,u`fG!\ÂFÆ+Æ>ã:RYÏ W£yé^>ZíèÁ □¼ðRåó¢çFû54Mz Ê □ý-ý[ÏÙ£8g,,uvÓŠɵjĐ □



#### U;øuíìú¦~□étÝ□19—»– I·¶D□"□%T ånÉøò

n;s $\Box$ °žaäpÙÈÚìô $\Box$ ×2çŠ&•Ú¶f^ □ÃD'Ø×ÊpÆ<sup>a</sup>(ù©<sup>2</sup>…è%ž€¬%<sup>a</sup>ü tóy $\ddot{E}9$ ¢ $\hat{E} \square 2N$ ÷ $\square$ y,  $\square$   $\square$ ~å $\ddot{I}E$  $\tilde{N}\hat{I}^{1}\ddot{I} \square^{\circ}\S \square a \square + s\hat{a}Q\dot{U} + c\hat{c}4)\dot{o} + n$  $\Box$ MïoŸ)kÎ<sup>1</sup>g $\Box$ tÎ}n OH  $f\dot{E} \supset \%, \sim Be Ot BZ O UV N! z; ¢$  $ZOUa \square o; \square u \square "7f" \square eE \square Yž9eç$ □¦}õÑÙ9ØmU□ìQíšÜAk€§)ÊÈ′  $\Box x7]$ Ë»íQ $\Box \Box$ ÜAï6çÁØ $\Box$ L.ôMz

## $\begin{array}{c} \exists \mathbf{Y} \Box \mathbf{O} \Box \mathbf{A}^{\mathsf{TM}} & \mathbf{O} \mathbf{S} & \mathbf{V} & \mathbf{A} \Box \mathbf{A} \end{bmatrix} 2 \div \\ \hat{\mathbf{u}} & \Box \hat{\mathbf{A}}^{\mathsf{T}} & \mathbf{I} \cdot \mathbf{L} \cdot \mathbf{\sigma} \mathbf{S} - \mathbf{T}^{\mathsf{M}} \mathbf{J} & \mathbf{S} \Box & \mathbf{U} \\ \mathbf{H} - \$^{\circ} \Box \mathbf{h}, \Box \hat{\mathbf{A}} \Box \hat{\mathbf{A}}, \mathbf{m} & \mathbf{H} \mathbf{I} \Box \hat{\mathbf{I}} & \mathbf{M} \end{bmatrix} \mathbf{I} \\ \mathbf{S} & \mathbf{F} \mathbf{h} \Box \mathbf{I} \end{bmatrix}$

#### Nr`‡o¨V1î6¡NĐ,6– Í@É)¼€\_¹!ÑDµ¿°®³ã£ëœä]6 {«Ã/□□R\*÷<iÏ□□ñ‰\4□...□8j ɧ

ûI;dç¦×þNY  $I \square \square Ž R \dot{U} > \Box s); \Box$  "" $\dot{o}sp\hat{O}R2JZ\hat{u}B > \Box$  $9 \Box \hat{E}/, \hat{o} \hat{L} \hat{O} - \hat{j} \Box \hat{u} \Box \hat{O} \hat{G} \hat{a} \mu \hat{H} \hat{\Box} \hat{n}$ ×"qî"[□Z□SÕä>q□"wêÒÉv`zO =Dh+ $\hat{U}$ çWdi ÆS ‰Ý"ô¯ô¢¤=Ý  $\Box S \Box \Box \ddot{o}hU \Box Dm\ddot{Y} \Box \Box \dot{Z}q \Box \dot{Z}q$  $l\hat{a}^{TM9} \Box \Box (\frac{1}{4} \Box A \hat{A} \hat{u} J \Psi \pm, SDM \Box -$ ′†DètP;+D³dÎ?až□ÇOþ□ýã□□š  $\Box$ féxQjÛïu\æ $\Box$ ég $\neg$ ßAëh -m¢‡ô 

### $\frac{1}{2}Z\check{z}\check{u} = \dot{v} + y$

 $; QQý \hat{I} \otimes \tilde{Z}'^{o} \Box^{1} \hat{A} = \Box^{-} e \check{S} O X s \Box m$  $\Box \hat{1}'' \dots = l(\tilde{a} \setminus Y \ddot{E} y \Box \pm \frac{3}{4} \tilde{O} u \check{z} \circ \dot{O} \hat{A} = \hat{A} =$  $\Box \acute{O}\ddot{a} \Box 5E \Box O \Box \Box \acute{E}^{3}_{4} \ddot{e}^{3}_{6} \acute{E} \acute{U}^{"}L \Box$ Ï'Ye§åÖõ@ábÞ□ié□§<□a‡□åâ  $f[X^{TM} \otimes aTS \square 6(``^ Uo {4'4} - b2 \hat{U})$  $\hat{O}^{2} \square b \square c2\check{z} \cdot T @G:$ #oˑ³y¯...œ□.5û' å\$õHHý®Ýò™s"èØ>F2й¼þ%  $\ddot{Y}8J^{TM}\dot{o}|\acute{I}^{o}N?G\times m \quad \hat{E}^{*}\hat{E} \square$ 

 $\Box \dot{A} \Box \tilde{a} \neg t \Box \dot{U} \Box a \Box u > g\% \div HO \sim i$ OÇ I"u $v^{-} \pm lHKg n M^{TM}$ ,  $\Box^{3}_{4}\Box mZ$ )60fòÚ`Qè^&X $\Box$ , R~ $\tilde{n}$ P $\beta$ N9fžK&ð- $\Box$ Iæ<sup>2</sup>G;=f  $\mu$ Žgc $\Box$ óÃ9Dn§□¥‡Ç□é□□·W□³□~¥□  ${}^{3}\check{z}\Box\hat{u}\Box c\Box F\Box \not{c}\Box^{h}e\Box$  $\Box \ddot{U}4 \Box \Box ; b \Box f \ddot{I}d\ddot{y}\acute{Y}\$ \Box (''\acute{I}\ddagger`A4$ 3...l[é7 ] d«;šüþ-øß $f^{1/4}$ V ] ;ÉOLg  $\square \mathbb{R} \delta \ddot{Y}, \ddot{o} a \dot{y}^{\circ} \ddot{y} \delta \square \delta \% ! 8^{1} \ddot{Y} \sim \ddot{u} K \square R$  $1K \square \hat{e}3 \square^2 \square E \% VZ \square \square \square A \notin \dot{-}$ 

## $z@\ddot{a} \times \acute{U} \square \square \acute{O} \ddot{Y} P \textcircled{C}: W \square \ll T \square \acute{u}$ $\Box jR\_\square \mathring{A} \pounds^2 H \square$ $(rF \square \textcircled{C} L + g``B` \hat{a} \check{\delta} F$

KY{š%AOKo}LS—&OEO^z tRjGkÌfôM·cJ Za( D£šîÀ GI%  $p+-f\square$ µ^ÎÚhPjÑéÖÚøH§yŠ ×¢Þ--ôR— |v§Y>;Ë□ÅZz□ì>ö÷°£ÓUal'wGé °Î\*  $\frac{1}{2}$   $\square$  HŽv~ $\hat{u}^{32}$   $\dot{O}$  Q4>i,  $\nabla \mu X^{68}$  Jõ €§ □èibü6Ÿ@B>Fu>gM™¥AŒzÍ  $\Box$  ĐfcT  $\Box$  OjAü  $\Box$  Ó"Z z<sup>a</sup>÷}wHWj  $\Delta 71 \cdot \hat{\Gamma} \Delta \hat{\Lambda} 1 = 3 \cdot \mathbf{V} = \Delta \mathbf{T} = \dots = \mathbf{O} \mathbf{C} \dots$ 

 $B \square \square \tilde{o}; M \check{S}bk^{3/4} \square V \check{s}r^{-}/Q \mathring{a}n(a)... \check{c}$  $| = EZ \square n \square Qc \ddot{I} Du \check{z} \square T \square !" \neg < Pc$ Åp.E \[ ; °.+ØfÄ Buq©bù \] åW•ìh É\$œUQN«i«>HóéÌÝ 🗆 mÅQZlB YFðÅ<sup>2</sup>MšLI<sup>"a</sup>r/; $\sim \tilde{N} \Box \frac{1}{4} f'$ % DĐQ; À DÕ,, ËÇÝŒìÂÌ Þ¢'ŠrŸ G□^'²E§2ïÈA□□Å€¯4ÿÀŽ-«Ôç′  $\div pf D h \square u \square h N$  $kO'' \times f \Box \hat{I} \cdot a \Box \Box \hat{o} \hat{I} \Box \hat{P} \hat{a}^{\circ} 5 \ddot{y} \Box N \Box \P \tilde{a}$ 

### $(Em)^{3/4}O) \approx 2? aOZUO \square kb'8$ ¢□□}jâĐ□¬ú- $\neg f$ ¢ìžîó¤/s5Ìê $\Box$ $\Box$ PÚÏHĐÄ,,-êÍ $\Box$ $\emptyset \Box e D \ddot{U} h b \delta \dot{U} \Box q Y \hat{O} q \Box y \tilde{O} \Box a^{1/2}; \emptyset \dot{I}$ $1\hat{e}0 \square \dot{\phi}M\hat{i}] \cong \dot{v}\hat{I}U \rightarrow \dot{h}Ba \dagger \dot{U}$ $\tilde{N} \square \square a^{\circ} \rightarrow \square P^{\circ} | q^{*}T E..., e$

### Í <sup>a</sup>-ç□w∖

 $\partial c y ? 4 \ddot{a} K \neg (a) OSO cIO \square D \hat{o} \square A \ddot{o} \dot{-}$  $k\delta \Box ? \Box 8\hat{E}\phi^{*TM}Y\dot{v}^{*}.T \Box A \hat{e}WQ0$  $\Box e\hat{e}^{\hat{v}}\hat{d}\hat{J}U^{2}K \Box R > "\Box o \times P \bullet \Box$ \*à□éþõŽ9þ>□Uó□ÊÂð— □‰□™jÞ?.□tzŽ¢õ^JM'~®éÖ□Í 9ð<sup>h</sup>œBÕ3NV þü"£Š□©½ÁµyiÑ~ñÒRÅ□ò¶^□ Î<Ô=šÛ=YçLã³7Ú-,,á-E□p+a□Ü đĐ

 $G^* \square A / \# \square \ll a DC'^1 / 2 \square U^ \Box) \Box \langle \ddot{o} \S \Box \dot{o} \dot{a} : \dot{u} l, \rangle \eth \# \Box b \tilde{A} 5 w P \Box \div$  $\Box \phi a \Box \ddot{e} E w (\Box^{3} Uib \dot{I} \Box \Box, Y \Box u'')$ ¢E¼Áú□j§"†M¶  $\Box 4 \hat{i}; \ddot{y} \acute{u} O 8^{a} o \tilde{o} \Box > \ddot{e}; \Box z U \Box \dot{U}'$ 

 $\square \frac{1}{4} \square$ )'lÎuĐÒ> $\square + \hat{e} \acute{O}rI(\square \acute{Y}Y \square 0i$ An>ë 🗆 £;;;Fç>Š3;쎗 ê<sup>-</sup>¾œ=Ä^š □ XyÿÔߎò<sup>2</sup> □ Z6ÓÜ0 wŠR]u $\square$   $^{0}$ /-SçŽå<sup>1</sup>/<sub>4</sub>Ÿ Ó  $\Box$  PL#O¦ë:qÎ  $\mu$ "\"lr  $\Box$  $\frac{1}{4}P\dot{U}$ \$6~e\_å $\Box$ óç $\Box$ ;åT %¿åTÉóh¹...&É£KÉÞm...Š  $L_i e \times \% 2 \Box (\dot{u} \dot{E} V \dot{Y} \Box^2 \dot{A} 4 \Box cr \dot{U} \dot{j} \pm \dot{I})$  $\partial R \leftarrow CBI = cBI = \dot{a}En \sigma \Box$  $\rightarrow \Box J^{\sim} \Box Z$ 

 $Oce \mathbb{R}S^2D \square "#-bc+Þcüìß-$ .Š"sQ£  $\square$ ¶Î~i[g>ät}œðwäoiIáüëj! M%¦mä¬d •Šv‰AÜKÏ峑iG□"L‹Qv- $\tilde{O}oI \longrightarrow b \square \P Q \square -$ ÝH>¿d['±dĐHzÙCÒàgrÉK>S 🗆 SIH $\langle U \Box \ddot{O}$ ¶ýTHhÞ¬P  $\Box \ddot{Y} \Box$ 

 $\Box \pm \Box \dot{U} - \%_0 \neg *J9 \Box Pm \ddot{} - \cdots$  $\dot{A}^{1/4}\dot{u}$ -0"WQ—<kW\Ò ' $\hat{v}^{3}$ )Â $\Box$ ;  $\Box$ mKÛCÔ<'4Đ<sup>2</sup>yLh $\Box$  $\Box$ í\fy6Ï@múý® Þíà<sup>3</sup>ìÀ§Òw- $\& \widetilde{V}$   $Y \widetilde{V}$ Τê x □àiu6°,,h><sup>3</sup>Ž0€<sup>1</sup>ê □ EÜa:ÔS; áÑ□/2acy<×ö{□"?|.õ□¾°ÆÙ□y ‰èý#…u  $\mu \hat{a} \Box \hat{t}^{TM} W \mathcal{O} \Box \Box K \Box c l/D \hat{u}$ 

 $UC \bullet rB \Box E \Box \gg' jr \Box I? \times "Y^2B"O"a \Box I$ °Ž.- $\Box(a)$ ¬%Jì†ðX‡þ'ï  $i \times Y\ddot{a} \otimes o \Box J \Box r \dots \Box E^{1/2} \Box U \ddot{O} x \check{z}$  $\Box \hat{i} \hat{l} \hat{I} \hat{A} \hat{A} \hat{O} \Box \mu (\hat{u} \hat{E} \Box \Box / \hat{i} - \hat{u})$  $\dots a \ll K \square R - \check{z} 5 (a) q \ddot{U} -$ □ëÊŸªÖDU!ü□ö□Õ"ªLá□ª†^¢‡ <sup>3</sup>Ïòêfìf¢ìÙ□<sup>a</sup>NTÉNTÇŇð□£åj  $\square \tilde{N}^{3}4p \square ZX \% \ddot{y} Z: "^{3TM} \dot{O} / \ddot{o} | K'' ZO1$  $|\hat{A} | '^2 | \ddot{u} | \hat{O}n \otimes | H0, sX^\circ xB \pm \check{z} \otimes D$  $\Box G \delta i \dagger P \Box \frac{1}{4} \frac{1}{2}$  <sup>3</sup>6(ZÞeoi)»õýYê'  $\lambda \lambda \tau_{a} \ddot{\tau} \tilde{\gamma} \cdots 0 \dot{\tau} \Box 1 \ddot{\tau} \Box \eta \ddot{\tau} \dot{\gamma} \Box_{a} \Box$ 

zO¥°, AAO•K¢üNÅTEòFR[" ^1 é•<sup>3</sup>rUØ $\square$ -B $\square$ 7Jq-}C5oï6ŸG\JT\_ôÝ.Ý,,²sämvY䌓  $\hat{E}^{TM}$ % $\hat{N}$  $\mathcal{E} \square / \hat{O}f(K \acute{O} E \widetilde{N} \acute{U} U \square \ddot{A}g)$ ¬□†ÇirFéjygT)¾K□R•9à UeÒ‹'  $\Box \delta q, \delta''$ ?"UU  $\Box ER \Box \delta bp\mu \Box y = Z\hat{u}$  $\frac{1}{4}J_{H} = \frac{bV}{2} \frac{\dot{u}}{\dot{u}}$  $\hat{U}xdc^{1}\omega \square \tilde{D}\tilde{s}\tilde{n}\tilde{b}$ " $\hat{u}=C.C.\tilde{o}\tilde{e}\tilde{n}\ll\ddot{o}c\}-$ ÏëaÝbKTÎuLR¤;§=?ÅX1□′2~~

 $^{3}kS_{EZ} = UE^{1/2}f'' * P'' * 7\hat{e} < \#T\#$  $\tilde{A} + \times \tilde{0}^{\circ} D5I \square$  "  $\square$  "  $\langle S^{TM} \hat{1}9 \acute{E} \Box 8|[.\square\dot{A}o\dot{Y}\square]\cdot7Y\ddot{o}\hat{I};\dot{E}^2\div\Box g^{TM}9\Box$ É 🗆 🗆 Qq¥—  $\ddot{U}_{j}\pm\dot{Y}\square N\gg\square\square\ddot{y}$ "ëfq) $\tilde{O}_{x}R\dot{O}*i\hat{E}$  $\times \square$  }<sup>3</sup>/<sub>4</sub>h $\square$   $\mathbb{R} \pm q... EV$ )°6? $\square pX \sim \square$ 1

#### $\Box [\Box \tilde{0}4 \Box E \Box 1!94 < \neg \#$

 $\dot{O} \square qaj b{\tilde{-} + \square -$  $c \Box C Å c q E Y 3 d \times i c Y Z \Box^{2} 8 R$ >Ò];"'<sup>1</sup>‡T±õñcÍÚË □ŒÁ □ÈfUO —îŽ`uiZ.3]¤— "« $\Box \ddagger \dot{U}^1 \div \dot{L} \ddot{U}$ "Ò).~\×èRéðü¾ÝíÙ  $\Box \acute{e}^{TM}$ Ş m"étx | Z...š5má 🗆 6É

#### Az

### ý° $\Box LfZ \Box$ úïÚ $\Box$ ]þ®%ù@ $\Box$ Ûîý O 5 $\Box$ ֖Ý&°pÌÃPŸí¢ž $\Box$ îÉr7ñ $\Box$ èŽ

W



## $\hat{O} \cup \mathbb{I}_{i,i} = \hat{O}^{\circ} (\hat{O}_{j})^{2} \hat{a} \nabla \hat{O} \hat{U} \cup \hat{V} \\ \hat{N}_{i} = \hat{O}^{\circ} (\hat{O}_{i})^{2} \hat{a} \nabla \hat{O} \hat{U} \cup \hat{V} \\ \hat{N}_{i} = \hat{O}^{\circ} (\hat{O}_{i})^{2} \hat{a} \nabla \hat{O} \hat{U} \cup \hat{V} \\ \hat{V}_{i} = \hat{O}^{\circ} (\hat{O}_{i})^{2} \hat{A} = \hat{V}_{i} + \hat{V}_{i} + \hat{V}_{i} \\ \hat{V}_{i} = \hat{O}^{\circ} (\hat{O}_{i})^{2} \hat{A} = \hat{O}^{\circ} \hat{V}_{i} \\ \hat{V}_{i} = \hat{O}^{\circ} \hat{V}_{i} + \hat{V}_{i} + \hat{V}_{i} \\ \hat{V}_{i} = \hat{O}^{\circ} \hat{V}_{i} + \hat{V}_{i} + \hat{V}_{i} \\ \hat{V}_{i} = \hat{O}^{\circ} \hat{V}_{i} + \hat{V}_{i} \\ \hat{V}_{i} = \hat{O}^{\circ} \hat{V}_{i} \\ \hat{V}_{i} = \hat{O}^$

y9 ], e-œ ||Yí ||ÚC{}Rëî!Û,Y ||U || $\hat{a}\hat{E}\beta^{1/2}i_{1}...R\hat{a}\tilde{o}Y{\tilde{n}\sim a9T|otoiïÙa$  $|}<math>\hat{p}\hat{a}\hat{A}\hat{l}_{i}^{TM1/2}$  || $\dot{K}^{1},...$ ÆHZÓ< x n†>a‰;è</q || !|Íië±|]<sup>3</sup>"Îë¥t‡,"Å "q7...3 ||

## $\ddot{A}0 \Box X \ll \Box^{a} \{! \Box \pm U \dot{U} Z j^{2} - WT \Box$ $\frac{1}{2} \dagger \hat{I} b Z^{\circ} h 1 q y^{1} / 4 \dot{E} \ddot{u} M \textcircled{C}^{"} > \Box \Box \dot{u}$ $\frac{b}{n} \dot{I} \beta \dot{e}^{TM} | \mathring{a}$

### □=@OR×õ...š□E`□¨□¹àV"ùµè Á4^□ž1′ë³N¿7qÍþç"ÛG□õêú¶□ ™Ýü!□.Çï4Ç;K>□í[□□9W4ýA ùó)öQO ¦L,,'``z□J,H□Óé'Õ[¤

# $\hat{I}_{,,}\%R\hat{u} \square \square * C[W^{o}ej0s \square \square \hat{O}^{"}J ] \\ \square ZI] > 01\mu \acute{y}k CP \square * \acute{E}; cf^{\circ}\acute{u} < \square i \\ \square \square^{3}\% (\acute{U}); \ddot{E}A\hat{O} - \dot{I} \\ \dot{I} \hat{O}^{\circ} @c \square S'1 ^{2a} \square + ! \square \dot{E}c$

 $O \square E \pounds \square + IO \square D t T I Q \square W \square,,o$ Sdb { $\tilde{N}\Box$ "}1; 'x  $\Box$  ëôh $\ddot{Y}$ ,  $\Box Q \Box \check{z}$ ... 4}v\$äl $\ddagger$  E o 4»Ì (¿Amœ- $\Box$  ËoP"ÕçÙJj $\Box$ :èí $\Box$   $\Box$ hÂëÕ ;<sup>2</sup>;" ýëiý'¢ $\Box$ T}Û×ëoïý&>®ýñJŸ□U«õb□[—  $\Box F\mu'Br\%EÈ7,\mu5"$   $\Box Vê7=ÍÀEAi$ fTpÂhH`ýZC¶bÿŠÌîµ™□]:Aû&  $\Box \Box k0 \Box \Box \hat{E} \hat{U} \hat{A}: \hat{O}^{1}_{4} \hat{A} Du \tilde{N} \hat{a} \hat{Z}^{\wedge}$ □)ÃË÷+öGö̹üð}x`ÑuîÃ□ûĐJš "\_\_`\ **7** 

### À O aPi

 $\frac{1}{2}\&\hat{e} > > \times \acute{o} | {ao | > da^{2}c | Ji | ""š}$  $?"u``P2PYa | JA | "U``M^{1}E)ÇSÝ/G$ Ù | ©žÂ "uùšĐJj™8hÁ | 5KR`M` $| êÛrÅg¶Š<| * ,E|Ô|M | Đœ._ÉË$ k/<---

 $^{3}_{4}m\Box$ ó%ãù,Ú<sup>1</sup>E $\Box$ ^kMµâ $\Box$ ð;Ç7 $\Box$ R

### $\Box^{o}\Box Qz\Box$ iróçý $\Box$ ú° $\Box$ Âa

### $[\Box \hat{E}$

µÎU"»êÓÏÉJ£ï¦µ£Ë□′□…kg′□□ "^u0 (a) $\dot{e}$  $\ddagger$   $\hat{O}$  a  $5h \times \frac{3}{4}\ddot{u} - \left\{eL\ddot{e}Z6\right\}$  $\Box$ ié:I;K $\Box$ <sup>a</sup>\$=a $\Box$ ...ô $\Box$ dóUn~Uv  $^{\circ}$ ßvVRÑM6MÙ  $\square$  @èn  $\square$  C—  $\Box \square \dot{P}q^{\phi}, \ll \dot{\Omega} \dot{I} \dot{A}Q; \Box \square \dot{O}Z \square \ddot{U}$ 8äCÍ1g9□□€™∢iÏ-jm2Ú¬bqÒp< î;ò÷nÅÙ®¨;láCTÏâïW<sup>3</sup>/4Ô,¥{ýð k $\hat{\eta}Tz^{3/4} = \Box^{\circ} \hat{a}D\hat{a}O1E\beta p\ddot{u}\dot{U}$ m>£ ów3j%a:;úsbM  $\Box$ ;  $E\Box$ ;  $\Box$   $\Box$ UG

 $ZIKX \square \square OiP - Z^{a*} \square .o \dot{O}$  w'7<sup>3</sup>Uü^  $\dot{I}_{4}^{3}$   $\dot{O}$   $\dot{O$  $WQ\Box, \Box <^{TM}\Box$ ÷"3KîõŒjíó¾õl□□Õír΀x;m  $E \square i sd(\neg P \bullet a \square 1 ceq \square \square T \neg M x \beta$ bZÈ7ãŠctÔ%^UN»ÈE®]+M3×ý  $\square \% \hat{O}$ Š¢?□- $\square P\hat{U} \square$   $\hat{Y}O \square \hat{E}P1\tilde{o}eU(D \square 6, \square^{a}6)$  $\square f \hat{A} \square \acute{Y}gzB\check{s}^{o}\ddot{e} \square R^{1}/_{4} \square \tilde{O} \hat{o} \ddot{u}T - Y$ 

mIFi—  $\mathbb{R} \Box \ddot{a} E \hat{O} \Box \Box \ddot{U} \cdot \acute{e} D \dot{p} | \Box [m \Box \Box j \hat{I} 2 \tilde{N}]$  $n \square n \square \delta \square \delta \delta \delta$  $\Box J \Box Z \hat{O} \hat{a} \phi B \hat{I} D \hat{U} \hat{C}^{1/4} [O \Box R]$  $\ddot{a} P \square \frac{1}{2} \dots \square \hat{R} \hat{U} X \acute{E} (T \dagger w h 6 \acute{U} \square^2 v)$ C'= $\Box$ ; $\dot{P}\Box$ im' $\dot{O}J$ o<6<sup>a</sup>f $\ddot{U}\Box^{-}\Box$ '8| $\acute{O}$  $\hat{CO} \square Kå \emptyset C \check{s} i J \hat{I} \Im \Im \hat{E}, \sim \ddot{U} T$  $\pm \Box X \dot{U} \cdot)\% \Box \$ \Box Y > \Box Q [\dot{U}]$ n˫′Ÿø,,ÍDÌ¿A;²¬&£)6ZÄõ: 🗆  $\tilde{n}n^{V}m \Box \acute{e}\tilde{A}? > F3Pi\dot{A}y \Box \check{S}2\dot{a} \Box PV$  $\Box \approx \stackrel{\frown}{\Gamma} 1_{-} \pi_{-} \pi_{-} \pi_{-} \stackrel{\frown}{\Gamma} \stackrel{\frown}{\Gamma} \cdots \stackrel{\frown}{\Lambda} = 1 \times - \Box \stackrel{?}{\Gamma} \sim ( \square \stackrel{\frown}{\Lambda} )$ 

 $^{2}_{zD} p_{07} \square Uqz \square \pounds X2$  $Q\acute{A}\acute{E}(\Box \ddot{e} < \Box ‰2 \Box \ddot{e} \widetilde{O} \tilde{o} e \grave{o} wkt^{1/2} \Box z$  $\Box$  iĐ)TÛÌø $\Box$ <sup>3</sup>˧öt×') úç*f*88T"n^  $\Box - O\ddot{A} \otimes OD \Box; \square$  $\Box s \Box 3'\tilde{O} \Box^{})^{}\dot{U}(\ddot{I} \oslash \Box r E)$  $\pm G + \sim O \square h$ 

### ÏX6ñfy‰d»pR c□

### ëÛð{`X¢š§8™lö¹nMàãRà □ù□−

ܻbD"9^^\$'€8EjĐlSb\$ó=,^t~\û;: G ΀s°äÉø,š>ó>0,X<0ur875□ "ðvµ<sup>a</sup>□ %<m3Úåé" □iŽ9"«`ÙïÊ ÝÜuL□

# $\Box V$

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Shetland Islands Council

#### **REPORT**

#### To: Special Shetland Islands Council

27 May 2008

From: Head of Finance

#### Fund Management Annual Review 2008/09 Report No: F-020-F

#### 1. Introduction

- 1.1 The purpose of this report is to inform Members on the position and performance of the Council's external investments with fund managers.
- 1.2 The Council has three fund managers with total investments, under management at the end of March 2009, of £216 million.

Manager	Fund	% of Reserves
Baillie Gifford – Capital Fund	Bond	31%
Insight Investment Management	Bond	19%
Baillie Gifford	Equity	24%
GMO	Equity	26%

#### Funds under Management as at 31 March 2009

1.3 Baillie Gifford, Insight and GMO will all give presentations at this Council meeting concerning their investment performance over the year to end March 2009. In Baillie Gifford's presentation they will cover both of funds they manage.

- 1.4 Karen Thrumble will attend the meeting from WM Company, now owned by State Street, who independently monitor the fund manager's performance. She will analyse each fund manager's performance relative to the markets they invest in before that Fund Manager presents to the Council.
- 1.5 Along with this report are attached the presentational documents from Baillie Gifford, Insight and GMO plus a performance report from the WM Company on the relevant funds.
- 1.6 In this report I will review each fund manager in turn and compare their performance in 2008/09 against the market performance where they were asked to invest and also against the additional out performance target we asked them to achieve.
- 1.7 Due to the nature of the investments these managers are investing into, we take a long-term investment view, generally a five-year period. I will therefore not only look at each manager's performance over 2008/09 I will also look at their performance over a five year period, or from the inception of the mandate if that is shorter.

#### 2. Links to Corporate Priorities

2.1 This report links to the Council's corporate priorities, defined in its Corporate Plan, specifically in relation to assisting the Council in ensuring the financial resources are managed so that the Council can sustain and develop the economy.

#### 3. Background

- 3.1 The external investments of the Council funds (i.e. other than those invested in the local economy) are co-ordinated by the Council's Treasury function. The Pension Fund and Charitable Trust's reserves, although not covered by this report, are also co-ordinated by the Council's Treasury function. This approach delivers a unified approach; ensures that all the funds benefit from the knowledge and experience of Council Officers; and provides useful comparisons.
- 3.2 The Funds, their managers, type of mandate and market value are listed below:

Body	Fund	Manager	Mandate	Market Value (£m)	
				2009	2008
SIC	Capital	Baillie Gifford	Bonds	66	72
SIC	Miscellaneous	Insight	Bonds	41	41
SIC	Miscellaneous	GMO	Equity	57	74
SIC	Miscellaneous	Baillie Gifford	Equity	52	70
Total				216	257

- 3.3 The Miscellaneous Funds mentioned above are made up of the Renewals and Repairs Funds; the Reserve Fund; the Marine Fund; and the Insurance Fund.
- 3.4 During 2008/09 the value of the Council funds decreased by £41 million.
- 3.5 In the main, this report concentrates on fund manager performance relative to the markets but we also need to consider the effect of any cash withdrawals or injections to the funds and the performance of the markets themselves. These influences can easily alter the absolute fund value.
- 3.6 The following table shows the effect on the fund due to withdrawals/additions and the market movement.

	SIC Funds
	£ million
As at 31.03.08	257
(Withdrawals)/Additions	(18)
Market Movement	(23)
As at 31.3.09	216

The above table shows the market movement was negative (£23 million). Even though the Bond funds produced positive real returns it was severely outweighed by the large falls in the equity markets, which made the overall market movement negative.

The withdrawals from the SIC Funds totalled £18 million during the year, these withdrawals are required to cover the Council's revenue deficit and Capital works programme.

3.7 The 2008/09 market performance by asset class is set out below:

Equities:	UK North America Europe Japan Pacific (Ex Japan) Emerging	% -29.3 -14.0 -31.1 -10.6 -23.1 -26.3
Bonds:	UK Overseas Index-Linked	10.3 36.7 -1.3
Property Cash		-25.5 3.6

3.8 This report reviews performance in 2008/09; a quick update for the first couple of months of this financial year 2009/10 shows a continuing poor global economic situation but we have seen a slight recovery in the stock market from it's low in early March 2009. There are mixed views on whether the recent market recovery is sustainable or not but the consensus of opinion believes there will be a recovery underway by the end of 2009. In 2009/10 the stock markets have recovered some ground and at the 1st May the FTSE 100 was up 5.3% and the Council Funds had a value of £222 million.

#### 4. Fund Manager Review

- 4.1 The rest of this report takes each mandate in turn and discusses manager performance.
- 4.2 A Fund Manager's performance is measured against a specific fund benchmark, which is made up of market indices of the countries where they invest.
- 4.3 A Fund Manager's target is a level of out performance above the benchmark that is seen as achievable with a low level of measured risk on a given mandate. The Manager will actively seek to produce investment returns in order to achieve the stated target. Performance at or above target is desirable but any returns above the benchmark will add value to the fund above the market return.

#### 4.4 <u>SIC Capital Fund – Baillie Gifford</u>

- 4.4.1 Baillie Gifford has managed the Capital Fund since 1986. The Capital Fund is currently restricted to investments allowed under the Trustee Investment Act 1961. In effect it can be only invested in certain bonds and cash. The Local Government in Scotland Act 2003 has now vested in Scottish Ministers the power to make new investment regulations for local authority funds, which it is hoped will allow the Council Funds to be invested under similar regulations as a Scottish Local Government Pension Scheme. At present we are waiting for the new legislation, which is being drafted for Ministerial approval before it is proposed to the Scottish Parliament.
- 4.4.2 Baillie Gifford's benchmark for this fund is based on 90% bonds and 10% cash. Their performance target for this fund is to beat this specific benchmark by 0.5% per annum.
- 4.4.3 The following table sets out in summary the performance of Baillie Gifford and Co versus the benchmark and the performance target in 2008/09, and also on a cumulative basis over a five-year investment period.

#### Fund Performance versus Benchmark and Target

	Fund Return (%)	Performance v Benchmark (%)	Performance v Target (%)
2008/09	12.6	-0.8	-1.3
Five years 04/05 to 08/09	35.4	-2.8	-4.2

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (market indices).

The performance v target figure gives the percentage that the fund has out or under performed their set target.

- 4.4.4 Although the Capital Fund returned 12.6% in 2008/09 it under performed the benchmark return by 0.8% and the target by 1.3%. The 12.6% return is welcome but it is a disappointing performance from Baillie Gifford as the bond market return was greater.
- 4.4.5 On a cumulative basis over the five-year rolling monitoring period Baillie Gifford, are now 2.8% below the overall benchmark return. This position is due to their poor performance over the last two financial years, which is in contrast to their previous steady out performance.

#### 4.5 <u>SIC Miscellaneous Fund – Insight</u>

- 4.5.1 Insight Investment Management bought Rothschild Asset Management during 2002/03. Rothschild was initially appointed by the Council to manage this fund in 2000/01 with performance monitoring against the benchmark commencing on 1 April 2001. The former Rothschild bond team became the bond team for the new entity with very little disturbance. The Council accepted the recommendation of its Investment Consultant, Hymans Robertson, as endorsed by its officers, to leave this mandate with the new entity.
- 4.5.2 Insight's benchmark for this fund is based on 80% bonds and 20% cash. Their performance target for this fund is to beat this specific benchmark by 0.5% per annum.
- 4.5.3 The following table sets out in summary the performance of Insight versus the benchmark and the performance target in 2008/09, and also on a cumulative basis over a five-year investment period.

	Fund Return (%)	Performance v Benchmark (%)	Performance v Target (%)
2008/09	8.2	-0.9	-1.4
Five years	34.3	-1.2	-3.6
04/05 to 08/09			

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (market indices).

The performance v target figure gives the percentage that the fund has out or under performed their set target.

- 4.5.4 The Miscellaneous Fund with Insight returned 8.2% in 2008/09, which was below the benchmark return by 0.9% and the target by 1.4%. The 8.2% return is welcome but it is a disappointing performance from Insight as the bond market return was greater.
- 4.5.5 On a cumulative basis over the five-year rolling monitoring period Insight is now 1.2% below the overall benchmark return. This position is due to their poor performance over the last two financial years, which is in contrast to their previous steady out performance.

#### 4.6 <u>SIC Miscellaneous Fund – GMO</u>

- 4.6.1 GMO were awarded this mandate in February 2007 and they started to manage this mandate in August 2007.
- 4.6.2 This fund is invested in equities and is split 60% UK equities and 40% overseas equities. The performance target for this fund is to beat this specific benchmark by 1.0% per annum.
- 4.6.3 The following table sets out in summary the performance of GMO versus the benchmark and the performance target in 2008/09, and also on a cumulative basis since inception.

	Fund	Performance	Performance
	Return	v Benchmark	v Target
	(%)	(%)	(%)
2008/09	-22.1	4.3	3.3
One and a half years, Oct 07 to March 09	-29.3	4.3	2.8

#### Fund Performance versus Benchmark and Target

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (market indices).

The performance v target figure gives the percentage that the fund has out or under performed their set target.

- 4.6.4 The Miscellaneous Fund with GMO has out performed the benchmark return by 4.3% and the target by 3.3% during a year where equity markets fell. The fund in real terms has decreased 22.1% in value but this is not as severe as the fall in the benchmark.
- 4.6.5 On a cumulative basis over the one and a half year rolling monitoring period GMO is now 4.3% above the overall benchmark return and 2.8% above the target return. This out performance is in a period where equity markets have fallen and so has the fund value but due to GMO's management, the fund has not fallen as far as the markets the fund is invested into.

#### 4.7 <u>SIC Miscellaneous Fund – Baillie Gifford</u>

- 4.7.1 Baillie Gifford has managed this fund since 2001. The benchmark for this fund is based on 75% UK equities, 23% overseas equities and 2% cash. Their performance target for this fund is to beat this specific benchmark by 1.5% per annum.
- 4.7.2 The following table sets out in summary the performance of Baillie Gifford and Co versus the benchmark and the performance target in 2008/09, and also on a cumulative basis over a five-year investment period.

	Fund Return (%)	Performance v Benchmark (%)	Performance v Target (%)
2008/09	-25.7	1.5	0.0
Five years	12.1	0.9	-6.4
04/05 to 08/09			

#### Fund Performance versus Benchmark and Target

The performance v benchmark figure gives the percentage that the fund has out or under performed the benchmark return (market indices).

The performance v target figure gives the percentage that the fund has out or under performed their set target.

- 4.7.3 Baillie Gifford has out performed the benchmark return by 1.5% and equalled the target return during a year where equity markets fell. The fund in real terms has decreased 25.7% in value but this is not as severe as the fall in the benchmark.
- 4.7.4 Baillie Gifford is just above the benchmark return over the cumulative five year rolling monitoring period by 0.9% although below the target by 6.4%. Baillie Gifford has therefore added real value to the fund over the five year period, even though they are below the target return.

#### 5. Financial Implications

- 5.1 Performance by a Fund Manager will have long-term financial consequences for the Council.
- 5.2 There are no decisions from this report, so there are no immediate financial consequences.

#### 6. Policy and Delegated Authority

6.1 Day to day responsibility for Fund Management is delegated to the Head of Finance of Executive Services Department and/or his nominees (SIC 25 July 1996 minute reference 97/96). The Council retains responsibility for appointing Fund Managers and for regularly reviewing and questioning a Fund Managers performance (min ref 97/96). This report provides that opportunity.

#### 7. Conclusions

- 7.1 Baillie Gifford (Capital Fund) under performed the benchmark and the target in 2008/09. Cumulatively over the five-year monitoring period they are below the benchmark return. This is due to their under performance over the past two years, which is in contrast to their long-term steady performance.
- 7.2 Insight (Miscellaneous Fund) under performed the benchmark and the target in 2008/09. Cumulatively over the five-year monitoring period Insight is 1.2% below the benchmark return. This is due to their under performance over the past two years, which is in contrast to their long-term steady performance.
- 7.3 GMO has out performed the benchmark and the target in 2008/09. Cumulatively over the one and a half year monitoring period GMO are also above the benchmark and the target return. This is a great start to their equity mandate during a very difficult investment period.

- 7.4 Baillie Gifford (Miscellaneous Fund) out performed the benchmark return and equalled the target in 2008/09. Cumulatively over the five-year monitoring period they are above the benchmark return although below the target. Over the long-term Baillie Gifford are adding real value to the fund above the market return.
- 7.5 Overall the Council's fund managers have had mixed fortunes in 2008/09. The equity managers have out performed the equity markets but have lost value, as it was an overall negative market place. The bond managers have underperformed their respective markets but have added value to the funds as the bond markets increased in value during the year.

#### 8. **Recommendations**

- 8.1 I recommend the Council note with satisfaction the performance of Baillie Gifford (Miscellaneous Fund) and GMO (Miscellaneous Fund) in 2008/09.
- 8.2 I recommend the Council note with dissatisfaction the performance of Baillie Gifford (Capital Fund) and Insight (Miscellaneous Fund) in 2008/09.

Date: 20 May 2009

Rep No: F-020-F

# Presentation to The Shetland Islands Council

April LaRusse Graham Jordan

27 May 2009





# Presenting team



April LaRusse

**Fixed Income** 



Graham Jo	ordan
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**Client Service** 



Mandate and performance summary

- 563 -

### Mandate summary and investment restrictions Miscellaneous Funds



		Benchmark Weight	Investment
Category	Index	(%)	Ranges (%)
UK Government Bonds	FTSE Actuaries 5-15 years Gilt index	60	40 - 80
UK Index-Linked Bonds	FTSE Actuaries All Stocks Index-Linked Gilt index	20	10 - 30
Cash	Sterling 7 Day LIBID	20	10 - 30
Overseas bonds			0 - 20
UK Non-Government Bonds			0 - 30

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#### Portfolio objective

• To outperform the benchmark by 0.5% per annum before fees, over rolling 5 year periods

## Mandate summary and investment restrictions Charitable Trust



		Benchmark Weight	Investment
Category	Index	(%)	Ranges (%)
UK Government Bonds	FTSE A All-stocks Gilts Index	30	10 - 50
UK Non-Government Bonds	Merrill Lynch All-Stocks Sterling Non-Gilt Index	30	10 - 50
Non-Sterling Bonds	JP Morgan World ex UK Govt Bond Index ( $\pounds$ )	20	10 - 30
UK Index-Linked Bonds	FTSE A All-stocks Index-Inked Gilt Index	20	10 - 30
Cash			0 - 10

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#### Portfolio objectives

• To outperform the benchmark by 0.5% per annum before fees, over rolling 5 year periods

### Summary of performance Miscellaneous Funds



#### Performance summary to 31 March 2009 (%)

	Q1 2009	12 months to March 09	12 months to March 08	12 months to March 07	12 months to March 06	12 months to March 05	5 Years	Since Inception*
Portfolio	-1.47	8.24	8.15	2.35	6.68	5.38	6.14	5.91
Benchmark	1.10	9.24	9.56	1.80	6.39	5.08	6.38	5.96
Relative Return	-2.57	-1.00	-1.41	0.55	0.29	0.30	-0.24	-0.05

All figures are gross of fees Returns for periods greater than 1 year are annualised Source: Insight Investment \*Inception date 31 March 2001

#### **Fund values**

• Net asset value as at 31 March 2009: £40,707,101

### Summary of performance Charitable Trust



#### Performance summary to 31 March 2009 (%)

	Q1 2009	12 months to March 09	12 months to March 08	12 months to March 07	12 months to March 06	12 months to March 05	5 years	Since Inception*
Portfolio	-4.31	-0.01	5.29	2.37	7.04	6.25	4.15	4.40
Benchmark	-2.03	2.66	6.31	2.15	6.99	5.85	4.77	4.99
Relative Return	-2.28	-2.67	-1.02	0.22	0.05	0.40	-0.62	-0.59

All figures are gross of fees Returns for periods greater than 1 year are annualised Source: Insight Investment \*Inception date 7 October 2003

#### **Fund values**

• Net asset value as at 31 March 2009: £49,478,840

# Insight

# Portfolio activity

Miscellaneous Funds

#### Portfolio allocation relative to benchmark (%)

	30 June 2008	30 September 2008	31 December 2008	31 March 2009	Benchmark
UK government bonds	6.7	6.4	-16.4	-24.8	60.0
UK index-linked bonds	-8.9	-9.1	0.3	-2.6	20.0
UK non-government bonds	0.0	0.0	14.7	16.0	0.0
Overseas government bonds	0.0	0.0	0.0	8.9	0.0
Overseas index-linked government bonds	0.6	0.2	0.3	0.0	0.0
Cash	1.6	2.5	1.1	2.5	20.0
Total	0.0	0.0	0.0	0.0	100.0

# Portfolio activity

Charitable Trust



#### Portfolio allocation relative to benchmark (%)

	30 June 2008	30 September 2008	31 December 2008	31 March 2009	Benchmark
UK government bonds	7.7	8.5	-4.9	-11.8	30.0
UK non-government bonds	10.1	8.5	8.9	13.4	30.0
UK index-linked bonds	-10.4	-10.1	1.9	-1.4	20.0
UK non-government index-linked bonds	0.3	0.3	0.3	0.4	0.0
Overseas government bonds	-20.0	-20.0	-20.0	-14.2	20.0
Overseas non government bonds	6.4	6.9	9.7	8.8	0.0
Overseas index-linked bonds	0.6	0.2	0.3	0.0	0.0
Emerging market debt	0.9	0.9	0.9	0.8	0.0
High yield	1.5	1.4	1.0	1.0	0.0
Cash	2.9	3.4	1.9	3.0	0.0
Total	0.0	0.0	0.0	0.0	100.0

## Portfolio analysis Miscellaneous Funds



Sector allocation	Fund (%)	Benchmark (%)
Gilts	36.27	60.59
O/S government	6.69	0.00
Government index-linked	17.59	19.41
Supranationals	16.21	0.00
CDS	19.84	20.00
Cash*	3.39	0.00

Duration contribution	Fund (yrs)	Benchmark (yrs)
0-5 years	1.18	0.11
5-7 years	0.46	0.92
7-15 years	0.35	3.78
15-25 years	1.6	0.75
25 years +	4.29	1.08
Total	7.87	6.65

Yield	
Fund	Benchmark
(%)	(%)
2.3	2.18

## Portfolio analysis Charitable Trust – UK portfolio



Sector allocation	Fund (%)	Benchmark (%)	Duration contribution	Fund (yrs)	Benchmark (yrs)
Financials	15.35	12.65	0-5 years	1.28	0.71
Gilts	29.59	38.24	5-7 years	0.14	0.33
O/S government	5.10	0.00		0.04	0.98
UK index-linked	22.64	24.26	7-10 years	0.78	1.12
Industrials	11.71	6.99	10-15 years		
Securitised	5.12	4.00	15-25 years	2.03	2.57
Supranationals	14.96	10.86	25 years +	5.73	3.05
Utilities	2.29	3.01	Total	10.02	8.79
Swaps	-0.89	0.00	Yield		
iTraxx	-0.10	0.00	Fund	Benchmark	
Futures	-9.27	0.00	(%) 5.21	<u>(%)</u> 3.28	
Cash	3.54	0.00	5.21	5.20	

## Portfolio activity Charitable Trust – Overseas portfolio



Portfolio summary	Fund (%)	Benchmark (%)
Financials	6.66	0.00
Government conventionals	76.59	100.00
Industrials	6.27	0.00
Supranationals	4.10	0.00
Utilities	1.07	0.00
Cash	5.31	0.00

Yield	
Fund (%)	Benchmark (%)
2.87	2.05

Country breakdown	Fund (%)	Benchmark (%)
Australia/New Zealand	0.44	0.00
Europe	52.74	40.59
Japan	15.68	33.40
UK	1.39	0.00
US	29.72	25.57

Duration				
Fund (%)	Benchmark (%)			
7.48	6.08			

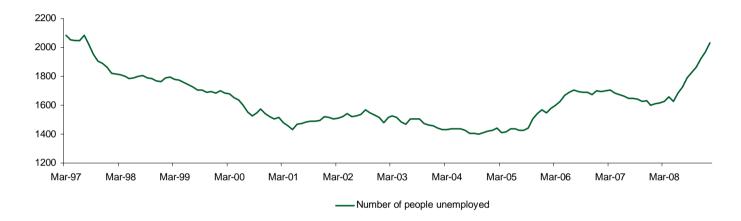




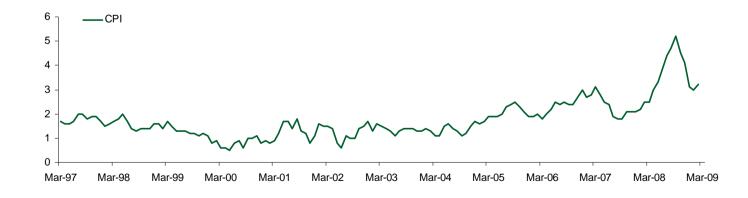


## **UK Economy**

#### **UK unemployment**



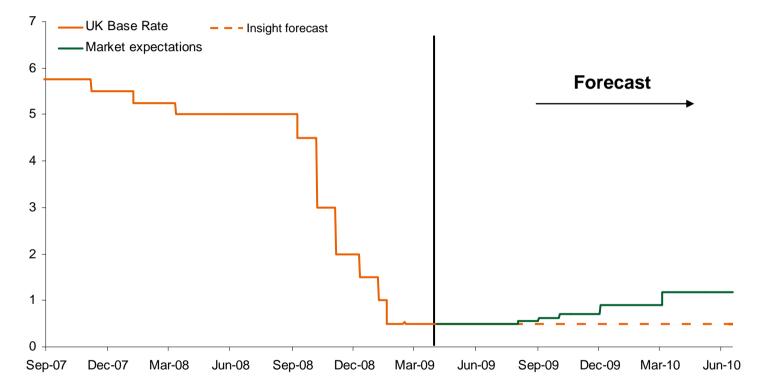
#### UK Inflation - CPI measure (year on year %)





## UK interest rates

#### BOE base rate (%)



#### Source: Bloomberg

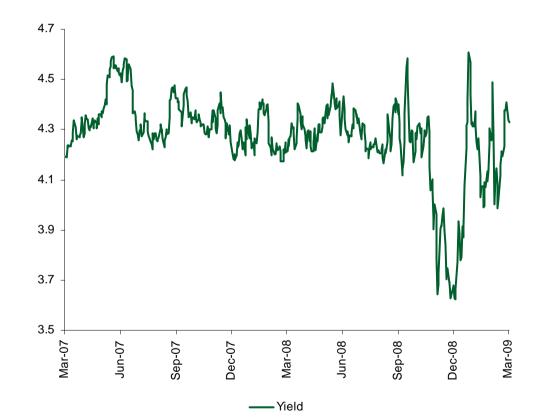
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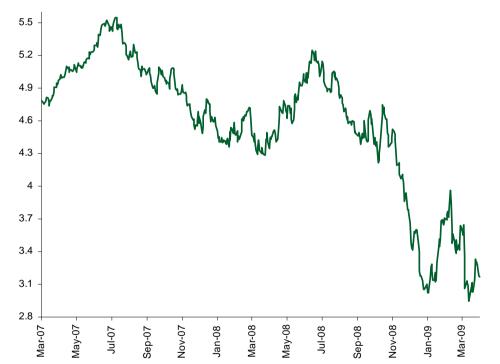
## Opposite extremes along yield curve



#### Historic yield of 2055 gilt (%)



#### 10 year gilt yield (%)



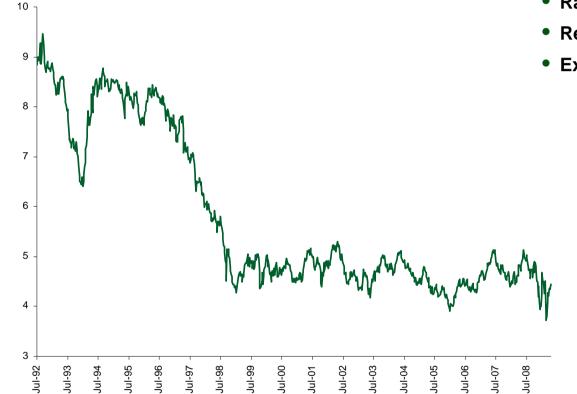
#### Source: Bloomberg

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### UK 20 yr Conventional Gilt yields (%)





#### • Range bound for a decade.

- Recently volatile given economic uncertainty
- Expensive end of the range

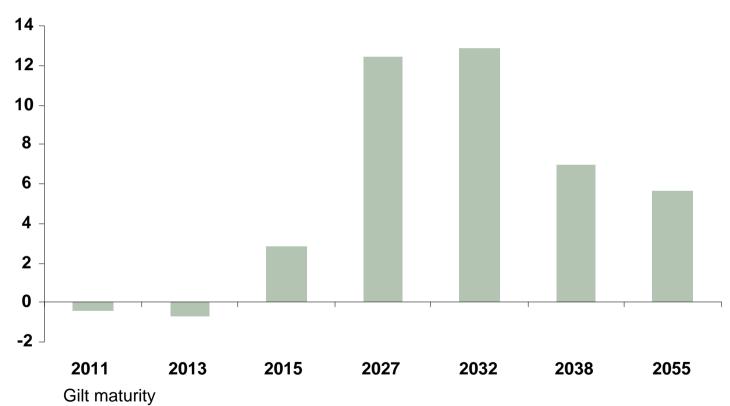
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### Gilt market: post Q.E.

### Price changes: 4th to 19th March 2009

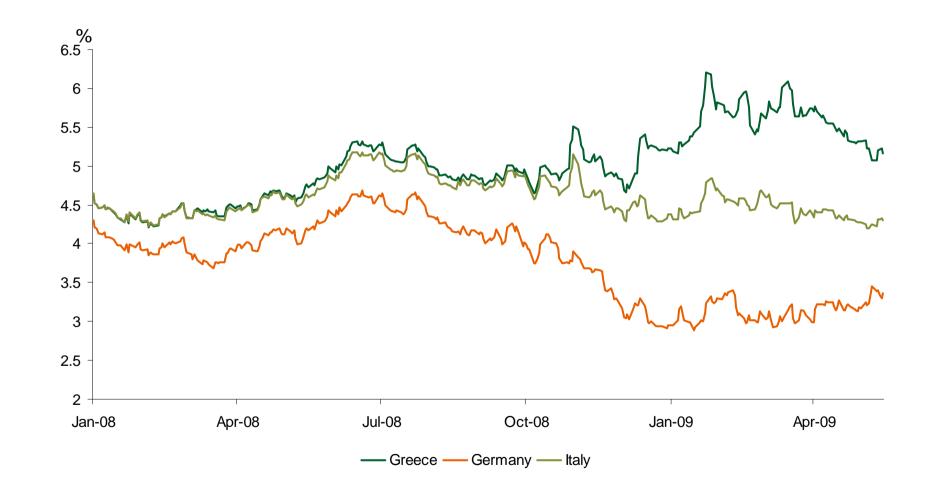


Price change as (%)

- 578 -

### Greece, Germany and Italy 10 year yields

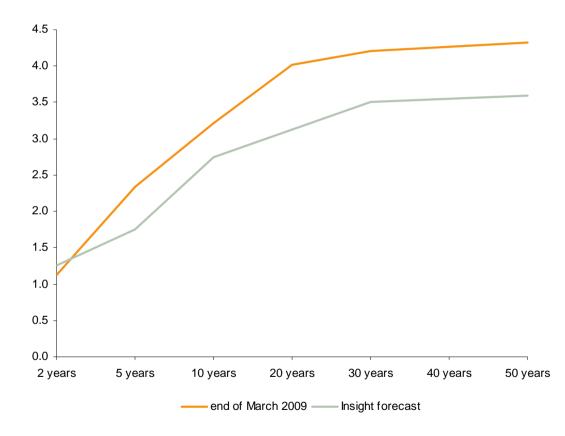




### Market allocation UK government bonds

### Insight INVESTMENT

#### UK government yield curve vs Insight forecasts (%)



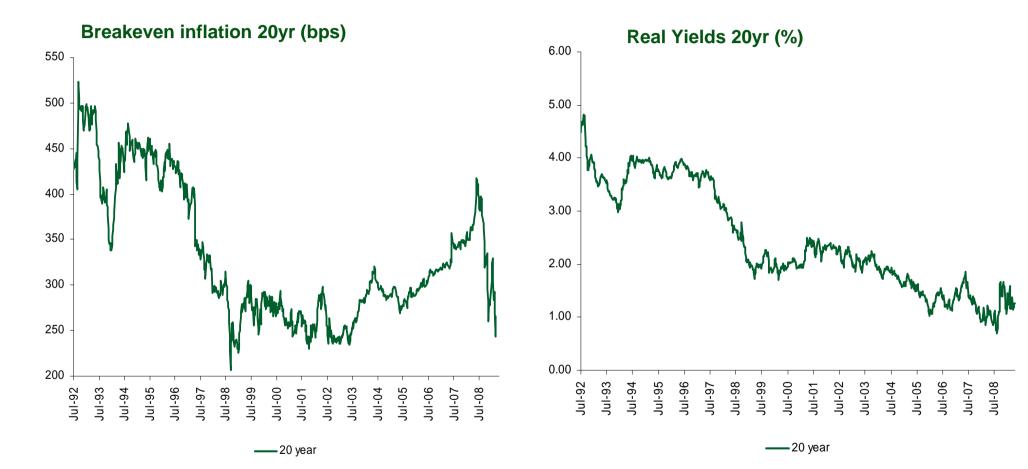
- Expect rally in bonds long duration
- Search for yield flattens the yield curve

Source: Bloomberg and Insight Investment

P9075 T0015



### UK inflation rate (bps)



#### Source: Bloomberg

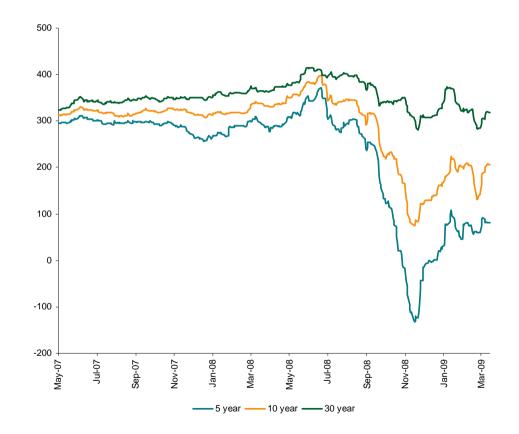
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- 581 -

### UK index linked bonds



### UK 5, 10, 30-year breakeven inflation rate (bps)



- Breakeven declined in Q4 on economic gloom
- Bounced in Q1 on hope

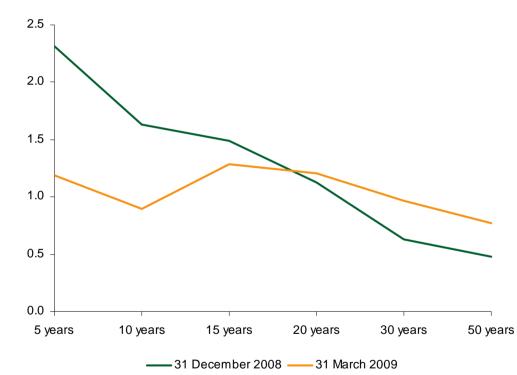
#### Source: Bloomberg

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- 582 -

### UK index linked bonds

#### UK index linked real yield curve (%)



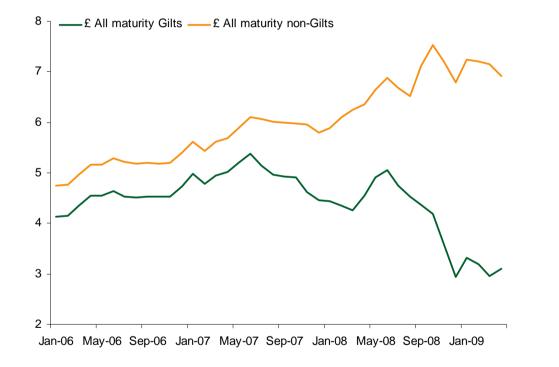
Insight

- Reflation/economic recovery trade
- Front end benefits from poor short term growth outlook

#### Source: Bloomberg

P9075 T0015

### Sterling all maturity Gilt yields vs. Corporate yields (%)



• Credit starting to stabilise

Insig

INVESTMENT

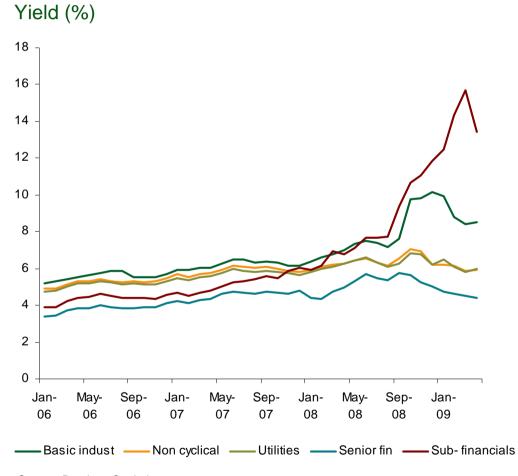
• Gilts rally on Q.E.

#### Source: Bloomberg

P9075 T0015

- 584 -

### UK corporate bonds: sectors



Source: Barclays Capital

P9075 T0015

- 585 -

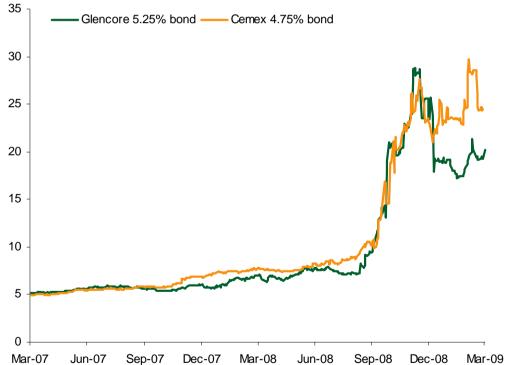


- Financials still under pressure
- Other sectors show signs of stabilisation

### UK corporate bonds: stocks



#### Glencore and Cemex bonds historical yields (%)



- Glencore
  - market leadership in commodities trading
  - compelling valuation vs sector
  - strong liquidity position and securing medium term financing
  - commodity price improvements
- Cemex
  - leading global cement company
  - barriers to entry underpin future income
  - government infrastructure spends

#### Source: Bloomberg

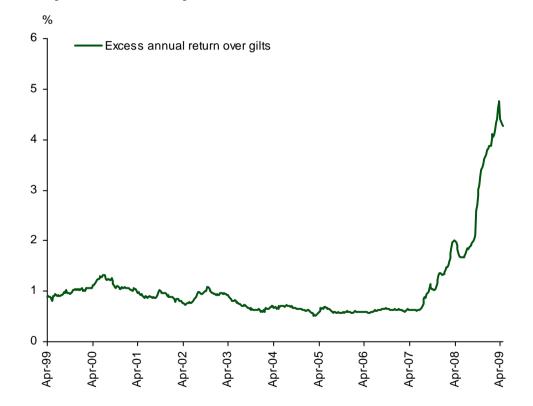
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- 586 -

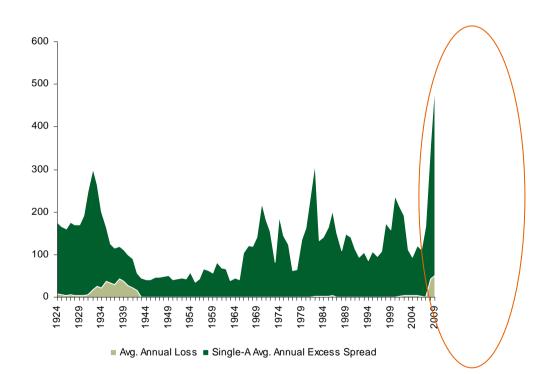
# The reward for owning corporate bonds (single "A" rated)



#### 10 years of history



### 85 years of history

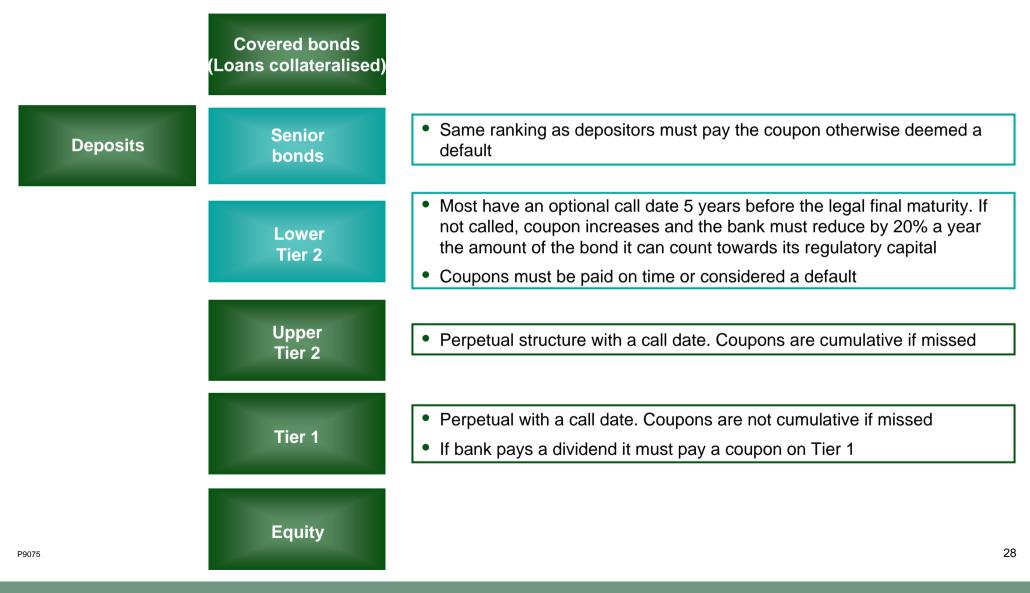


#### Source: Bloomberg, Moodys

- 587 -



### Bank capital structure



### UK fixed income Q1 2009 Performance attribution



	What we did	What happened?	Impact
Market Allocation	<ul> <li>Maintained O/W in credit vs gilts and index linked</li> <li>Added O/W in long US bonds</li> <li>Maintained O/W in selected HY, Loans and EMD</li> </ul>	<ul> <li>Breakeven inflation little changed, but volatile - trading a 100bps range</li> <li>Gilts outperformed US bonds and kept pace with European bonds</li> <li>IG credit underperformed gilts</li> <li>HY, Loans and EMD all outperformed investment grade credit and gilts</li> </ul>	<ul> <li>O/W in US neutral over period</li> <li>O/W in IG credit a small negative</li> <li>HY, Loans and Emerging Market exposure small positive</li> </ul>
Duration and Curve	<ul> <li>Long duration positions increased as strategic, tactical and momentum factors all positive</li> <li>Long positions focused on 30-50 year areas in UK and US</li> <li>Significant underweight in 5-25 year area of UK yield curve</li> </ul>	<ul> <li>Global bond yields rose as risk assets show some stability</li> <li>Concerns over government issuance were partly offset by QE buyback announcements in UK and US</li> <li>BoE buybacks focused on 5-25 year area</li> </ul>	<ul> <li>Duration impact a small negative</li> <li>Yield curve was a substantial negative</li> <li>BoE focus on 5-25 year maturities left longer and shorter dated gilts with little demand in the short term</li> </ul>
Credit Strategy	<ul> <li>Small long in IG credit spread duration</li> <li>Risk hedged tactically with iTraxx Main CDS and iTraxx subordinated bank CDS</li> <li>Improved the quality of the bank holdings by selling subordinated paper in favour of LT2 and Senior bank paper</li> <li>Bought selected BBB rated, cash flow positive</li> </ul>	<ul> <li>Subordinated financials were again the underperformers with UT2 and T1 the hardest hit</li> <li>Some European banks started buying back subordinated debt, or exchanging for senior bonds</li> <li>Basic industries issuers rallied as</li> </ul>	<ul> <li>Exposure to financials remains a drag on relative performance</li> <li>No exposure to defaulting companies in investment grade</li> <li>U/W autos a positive</li> <li>O/W telecoms a positive</li> </ul>
Security Selection	<ul> <li>corporates such as WPP and Next</li> <li>In new issues, added telecom, utilities, media and publishing companies at attractive yields</li> <li>Gradually increasing Media weight to O/W, buying quality, non-cyclical companies</li> </ul>	<ul> <li>commodities stabilised</li> <li>New issuance increased, with many issues coming at attractive levels</li> <li>Credit derivatives lagged physical bond markets</li> <li>ABS, HY and Loans stabilised</li> </ul>	<ul> <li>Positive impact from basic industrials</li> <li>HY, Loan and EMD positions small positive</li> <li>ABS a smaller positive after a weak close to the quarter</li> </ul>
Currency Selection	• Neutral	<ul> <li>NZD and AUD both weakened as interest rates were cut and commodity prices fell</li> <li>SKR fell on concerns about the economy and banking exposure to the Baltic region</li> <li>Yen weakened, with economic concerns outweighing risk aversion</li> <li>USD volatile.</li> </ul>	Neutral

### UK fixed income Q2 2009 Investment outlook



Investment th	nemes
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### Portfolio strategy

Market Allocation	•	IG credit offers strategic value versus government bonds US bonds offer value relative to gilts, though QE is a support for both markets The significant spread widening in EMD, Loans and HY makes these markets increasing attractive on a stock by stock basis Breakeven inflation already prices in an inflationary outcome for the UK	<ul> <li>O/W IG credit relative to government bonds</li> <li>Maintain overweight in long dated US bonds</li> <li>Maintain selected EMD, loan and HY exposure</li> <li>Neutral in index linked vs gilts, but prefer IG credit to both</li> </ul>
Duration and Curve	•	Official rates have reached the bottom in most major markets and central banks are start taking unconventional measures – i.e. QE Our strategic forecasts are for lower yields in UK, US and Europe, as deflation scares outweigh concerns over inflation BoE initial QE focus on 5-25 year maturities has destroyed gilt market liquidity in other areas – expect this to change over time Flatter UK yield curves are a possibility as interest rates remain low for a prolonged period and LDI investors switch from swaps to gilts	<ul> <li>Long duration, with strategic, tactical and momentum factors all positive in the UK</li> <li>UK yield curve exposure remains outside the BoE QE band, as the 5-25 year area will suffer when the programme comes to an end</li> <li>Long duration in US to partially diversify our position</li> </ul>
Credit Strategy		Some stability emerging in IG credit as equities recover from their lows Strategy remains to own senior and LT2 bank debt in issuers that are either well capitalised or are "too big to fail" in US, UK and Europe Expecting to see more banks offering to exchange Tier 1, UT2 and LT2	<ul> <li>Continue adding "liquidity premia" assets with strong credit fundamentals</li> <li>Using new issuance to add to credit exposure in telecoms &amp; utilities</li> </ul>
Security Selection	•	bank bonds into Senior bonds. This will be helpful to sentiment. New issue market providing a better tone and much needed liquidity QE in corporate bonds (part of the BoE programme) will provide a back-stop bid to the market The next phase of the credit crunch remains a move from liquidity crisis to a deterioration in credit fundamentals We are forecasting a rise in default rate, though this is now largely priced into the investment grade market	<ul> <li>Looking to add to specific deeply discounted BBB bonds with strong cash flow</li> <li>Keep offsetting iTraxx index shorts and focus on adding alpha in selected short dated cash bonds</li> <li>Add risk in selected one year IG and HY names with strong cash positions</li> <li>Overweight prime RMBS</li> </ul>
Currency Selection	▶.	Long term theme of weaker commodity currencies and a stronger JPY	<ul> <li>Looking to go overweight JPY and CHF in Libor plus funds</li> <li>Looking to go underweight AUD, NZD and EUR in Libor plus funds</li> </ul>

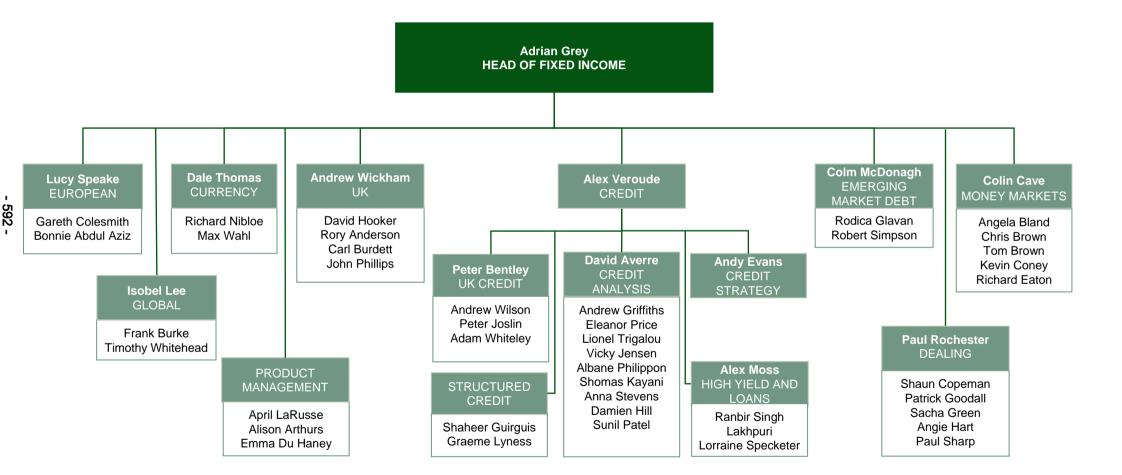
- 590 -





### Investment process Specialist teams





Source: Insight, as at May 2009

P9075 T0002



### Thank you

CONTACT Graham Jordan PHONE 020 7321 1725 EMAIL graham.jordan@insightinvestment.com

### **Notes**

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594 -

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## Shetland Islands Council Capital & Miscellaneous Funds

27<sup>th</sup> May 2009

Anthony Tait Tom Wright



- Stock markets stage a recovery in 2009 following a terrible year for equities
- Bond markets switched from fearing inflation to deflation
- Central bank action seems to have worked but at what long term cost?
- Government bonds performed well as investors sought safety they now look relatively expensive
- Indiscriminate selling left many high quality businesses trading on low valuations

#### **Performance to 31<sup>st</sup> March 2009**

	Fund	Benchmark	Difference
1 Year	12.6	13.5	-0.8
5 Years (%p.a.)	6.2	6.9	-0.6
10 Years (% p.a.)	5.5	5.8	-0.3

*Objective:* To achieve a rate of return 50 basis points per annum above a benchmark of 90% 5-15 year gilt index and 10% Local Authority 7 day call index, over rolling 5 year periods.

Source: WM Performance Services/Baillie Gifford

- Holdings in non-government bonds issued by the European Investment Bank, HSBC and Barclays performed poorly as the banking crisis took hold
- Holdings in longer dated bonds which should do better as interest rates fall underperformed as the government's Quantitative Easing program did more to support medium and shorter dated bonds

#### **Performance to 31<sup>st</sup> March 2009**

	Fund	Benchmark	Difference
1 Year	-25.7	-26.7	+1.5
5 Years (%p.a.)	2.3	2.1	+0.2
Since Inception (%p.a.)	1.4	0.1	+1.3

*Objective:* To outperform the benchmark return by 1½% per annum, net of fees, over rolling 5 year periods

Source: WM Performance Services/Baillie Gifford

#### What Hurt?

- Absolute returns were very poor as the financial crisis spread beyond banks into the wider global economy
- Exposure to mining/global growth stocks such as Schlumberger. We hold nothing in the "majors" BP or Exxon which did much better

#### What Helped?

- Few holdings in the banking sector nothing in HBOS, Barclays, Lehman, AIG etc.
- Steady growers Bunzl, Tesco, Reed Elsevier

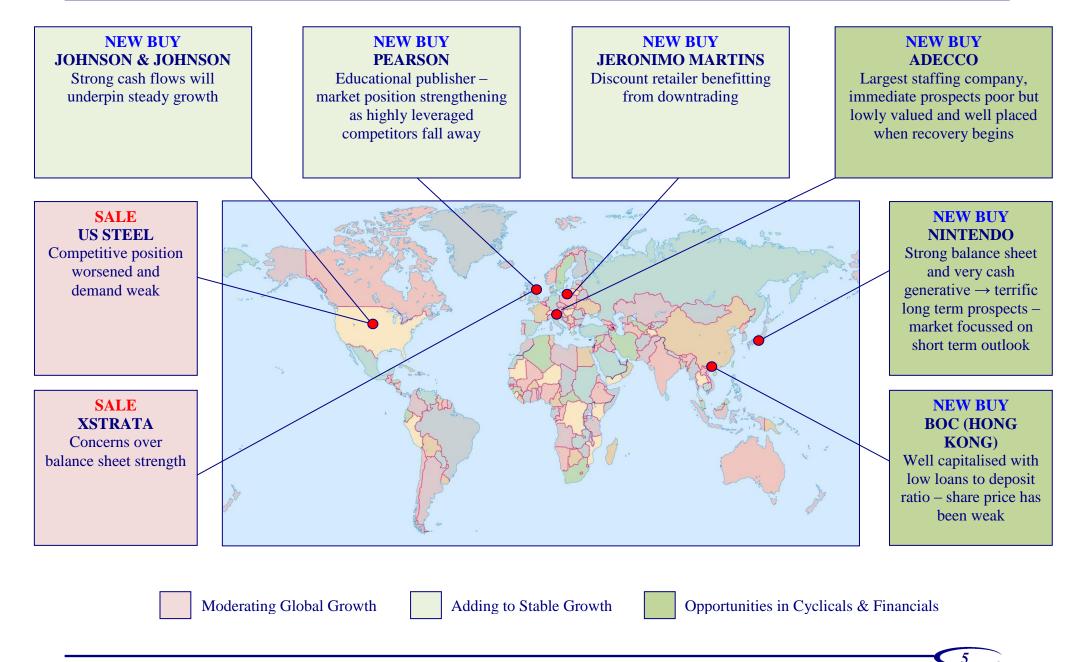
#### Bonds

- Government bonds now offer very low yields and little protection against a return of inflation
- Significant levels of supply to fund government borrowing likely to depress future returns

#### Equities

- Recent rally too optimistic? Growth in the West likely to be subdued
- Opportunities in Emerging Markets and in those companies exposed to them

### **Recent Activity**



- Oils prefer E&P and service companies to "majors"
  - BG Group, Cairn Energy, Wood Group
- Banks still wary as huge uncertainties remain
  - Survivors Svenska Handelsbanken, Standard Chartered should prosper
  - Opportunities in insurance: Berkshire Hathaway, Progressive, Lloyd's underwriters
- Long term growth businesses trading on low valuations
  - Nestlé, L'Oreal, Walgreen

Miscellaneous Fund	31 Mar 08	31 Mar 09	12 May 09
	%	%	%
UK Equities	70.1	68.3	67.8
Overseas	29.9	31.7	32.2
Total	100.0	100.0	100.0
Total Value	£69,542,574	£51,613,110	£57,682,783
Capital Fund	31 Mar 08	31 Mar 09	12 May 09
	%	%	%
Bonds	89.3	89.3	89.1
Cash & Deposits	10.7	10.7	10.9
Total	100.0	100.0	100.0
Total Value	£71,700,135	£65,498,756	£64,206,571

- Fund management partnership, based in Edinburgh
- Long term investment approach
  - Managers of Capital Fund since 1986
  - Miscellaneous Fund since 2001
- Independence  $\rightarrow$  stability which benefits our clients
  - Looking for opportunities in current volatile markets
  - Continuing to hire through downturn

# GMO

North America | Europe | Asia-Pacific

### **Shetland Islands Council**

27th May 2009

**Portfolio Review** 

### **Presenting Team**



#### Simon Harris, Partner, Head of Investment

Mr. Harris heads the UK investment team. He joined GMO in London in 1989 after completing a BSc in Mathematics from The City University (London). Mr. Harris is a Fellow of the Securities Institute.



#### Paul Bostock, Managing Director

Dr. Bostock is managing director of GMO in London and was a co-founder of GMO's London office in 1987. He is responsible for the investment activities and is actively involved in the firm's research program. Prior to joining GMO, he was a quantitative analyst at Baring Brothers. Dr. Bostock holds a BA and a DPhil degree in Physics and Elementary Particle Physics from Jesus College, Oxford University.



#### Nicholas Burgoyne, Director, Client Relationship Management

Mr. Burgoyne is a client relationship manager. Prior to joining GMO in London in 2004, he worked for 30 years in London's financial sector as both a portfolio manager and in client services. Mr. Burgoyne has an MBA from the Open University.

### **GMO** Overview

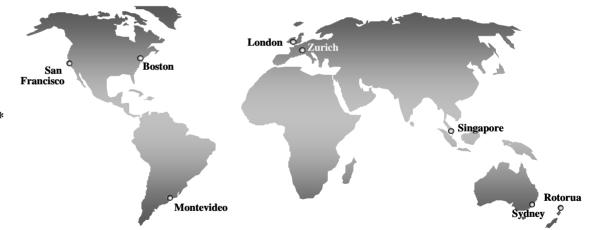
- Global firm private partnership, investment management is sole business
- Institutionally focussed business that has been in the UK since 1987 with a long-serving investment team
- Quantitative approach that offers rigorous and emotion free decision making

#### Assets in excess of £55 billion

- £47 billion in equities
- £8 billion in fixed income
- £19 billion in asset allocation\*
- £6 billion in absolute return strategies\*

#### People

- 102 investment professionals
- More than 400 employees worldwide
- 43 active partners



\* Asset allocation and absolute return assets are accounted for within underlying strategies and should not be double-counted.

Represents assets from both GIPS and non-GIPS compliant firms. There are two GIPS compliant firms. The first is Grantham, Mayo, Van Otterloo & Co. LLC ("GMO"), an independent investment adviser registered under Investment Advisers Act of 1940. GMO's accounts are managed by investment management offices in Boston, MA and Berkeley, CA. GMO has total assets of \$72,500,844,800 (USD). The second firm is defined as GMO UK Limited. GMO UK was established to manage mandates primarily for UK and other European clients. GMO UK is authorized and regulated by the Financial Services Authority in the United Kingdom. GMO UK firm assets are \$2,437,127,672 (USD).

As of 31/03/09

### **UK Sample Clients**

### Pension Funds, Sub-Advisory, Charities And Endowments

BOC	Kings College, London
Centrica	London Borough Of Tower Hamlets
The Cheshire Pension Fund	M&S Money
Cornwall County Council	Motorola
Corpus Christi College, Oxford	NCR (Scotland)
Cumbria County Council	Pipeline
EDS	Rolls-Royce
FMC	Shetland Islands Council
Halliburton	Uniq
HSBC	Unisys
John Laing	Winterthur Life
Jones Lang LaSalle	

Note: Clients listed here were chosen as generally representative of the types of clients that comprise GMO's primary client base (Pension Funds, Educational Endowments, Sub-Advisers, Foundations and International Organizations) and were not chosen based on performance-related criteria. It is not known whether the listed clients approve or disapprove of GMO or the advisory services provided.

As at 31/03/09 Source: GMO

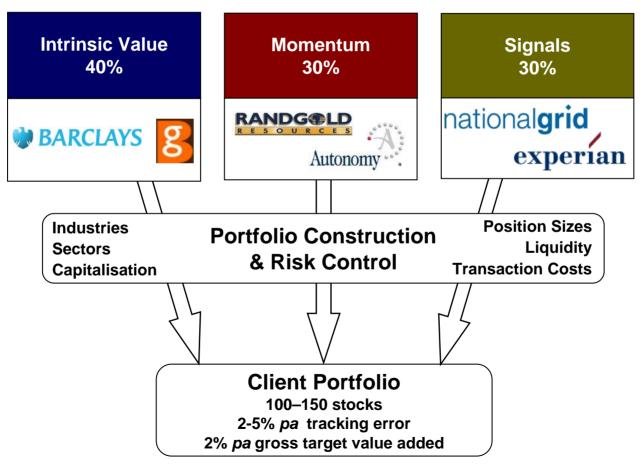
- 608 -

- UK EQUITIES
  - Performance Review
  - Outlook and Portfolio Positioning
  - Process Evolution and Research
- WORLD EX-UK EQUITIES
  - Performance Review
  - Outlook and Portfolio Positioning

### **UK EQUITIES**

### **UK Equity Core Strategy**

Transparent Investment Process



### Universe of 1,000 stocks

As at 31 March 2009 Source: GMO

### UK EQUITIES Performance Review Up to 31<sup>st</sup> March 2009

## **Shetland Islands Council**

Performance data in GBP, Net of fees and expenses as at 31<sup>st</sup> March 2009

				Annualized					
Investment	Month	Quarter	YTD	1 Year	3 Year	5 Year	Since Inception*	Market Value (M)	% of Account
U.K. Equity Core (08/24/2007)	3.31%	-7.60 %	-7.60%	-24.95%	N/A%	N/A %	-20.20 %	32.9	57.2%
FTSE All-Share Index	3.28	-9.08	-9.08	-29.33	N/A	N/A	-23.04		
Value Added	0.03	1.48	1.48	4.38	N/A	N/A	2.84		
Domestic Equity (08/24/2007)	3.31	-7.60	-7.60	-24.95	N/A	N/A	-20.20	32.9	57.2
World ex-U.K. Equity (08/24/2007)	6.21	-11.84	-11.84	-17.90	N/A	N/A	-14.30	24.6	42.8
FTSE World ex-U.K. Index	8.20	-10.69	-10.69	-19.10	N/A	N/A	-14.56		
Value Added	-1.99	-1.15	-1.15	1.20	N/A	N/A	0.26		
International Equity (08/24/2007)	6.21	-11.84	-11.84	-17.90	N/A	N/A	-14.30	24.6	42.8
Total Equity (08/24/2007)	4.53	-9.46	-9.46	-22.09	N/A	N/A	-17.81	57.5	100.0
Total Asset Allocation (08/24/2007)	4.53	-9.46	-9.46	-22.09	N/A	N/A	-17.81	57.5	100.0
Policy Benchmark **	5.25	-9.68	-9.68	-25.29	N/A	N/A	-19.66		
Value Added	-0.72	0.22	0.22	3.20	N/A	N/A	1.85		

\* Periods of less than a year are not annualized

\*\* 60% FTSE All-Share Index/40% FTSE World ex-U.K. Index

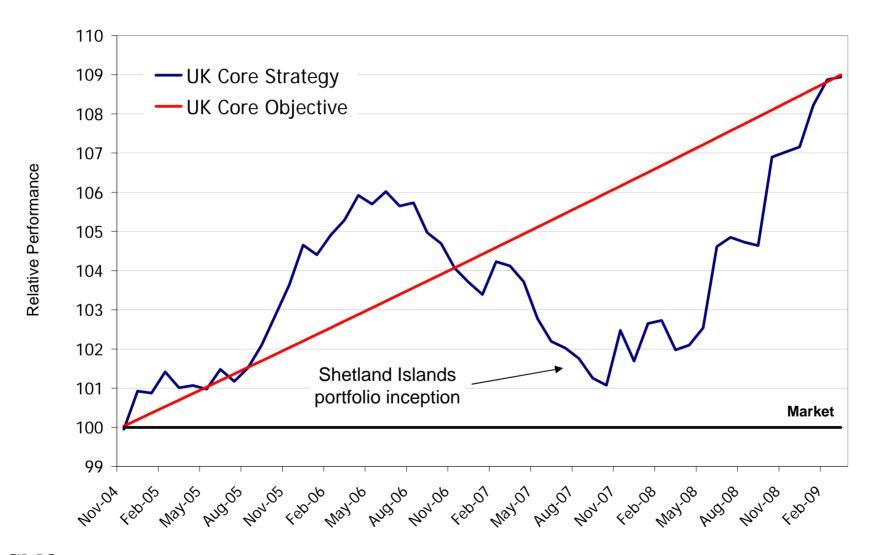
Note:

GMO

The FTSE World ex-U.K. is an unhedged index.

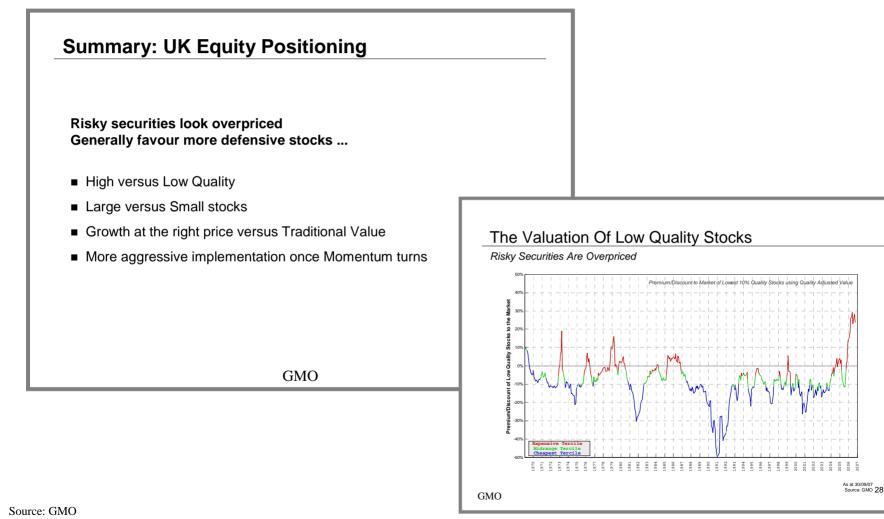
**Performance data quoted represents past performance and is not predictive of future performance.** Performance reflects the reinvestment of dividends and interest. Performance is net of investment management fees, fund expenses and other costs associated with the investment of the portfolio which are disclosed in the Fund Prospectus. Performance results are supplemental to the strategy's GIPS compliant presentation. A GIPS compliant presentation of composite performance has preceded this report in the past 12 months or accompanies this report, or is also available at www.gmo.com.

#### Performance Of UK Core Strategy & Objective



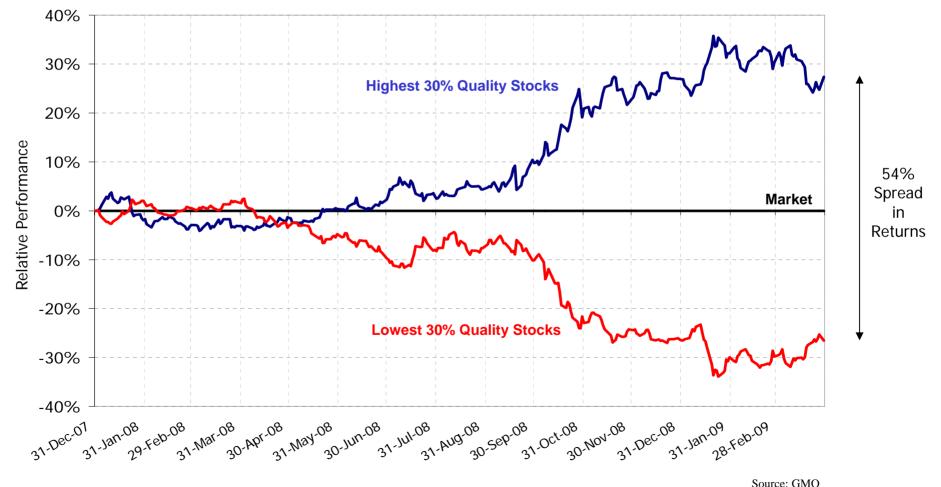
## We Had Been Expecting A Flight To High Quality

Exhibits taken from Client Conference (June 07) & Shetlands presentation (Dec 07)



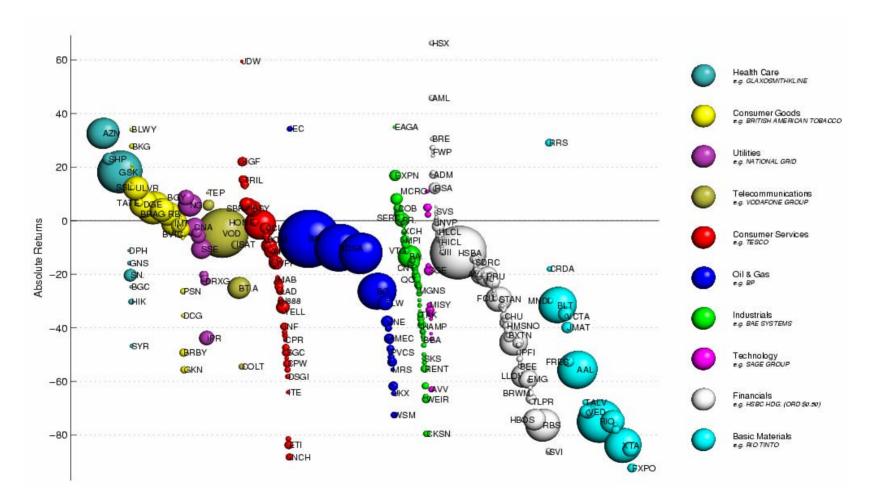
## Quality Has Played A Crucial Role In Recent Times

Relative Performance of Low and High Quality Stocks



## H2 2008 Market Performance

UK Stock Market Constituent Returns for July-Dec 2008



617 -

### We Had Been Expecting A Value Downturn

FT Article Nov 2006 & Exhibit Taken From Shetlands Presentation In Dec 2007

#### A testing time in prospect for value fund managers



Every now and then a glaring mispricing appears on stock markets that should ring alarm bells with investors The dotcom boom was an example. Now another has emerged with socalled value stocks: companies sought by investors for their low valuation

rather than for their earnings growth. Value stocks are nowhere near as highly valued as internet stocks in 2000. But they still appear overdue for a correction – at least relative to growth shares.

And you do not have to take my word for that. It is also the view of one of the most respected champions of value-investing: GMO, the fund manager co-founded by Jeremy Grantham, the influential US investor.

It points out that the valuation of traditional UK value stocks relative to the overall market is now more pricey than since at least 1969, the point at which its database begins.

The remarkable thing is that, in 2000, they were at the opposite extreme – by a long, long way the cheapest they had been (see adjacent graph).

In between the two poles, value stocks have enjoyed a golden run. GMO's analysis is based on the valuation of the most attractive 15 per

cent of the 1,000 UK stocks it screens relative to the overall group. Stocks are chosen on their cheapness, based on metrics such as cash flow, dividends and level of earnings. The basket is then adjusted to select "quality" stocks. In 2000, the valuation of its basket was 40 per cent of the average for its UK stock universe. Now, it is nearly 80 per cent. "Who would have thought in 2000

we would have reached such levels so quickly," says Simon Harris, head of UK equities at GMO.

The absolute outperformance has also been striking. Definitions of a value stock vary widely but the simplest measure is to divide the market in two between high and low-yielding stocks. This is based on the simplistic assumption that low-yielding stocks

#### UK value stocks



are growth companies that are investing more in the business than making pay-outs to their shareholders. Since the start of 2002, the FTSE 350 Value Index has risen 40 per cent compared with a 12 per cent gain for the FTSE 350 Growth Index.

The drivers of this outperformance include a search for yield and the rising number of takeovers of listed companies by private equity firms, many of which use similar valuation screens as value fund managers to identify investments. Companies with lowly valuations have also been the target of increasing shareholder activism. At the same time, low interest rates and the lack of a serious economic downturn since the early 1990s have seen the failure rate of lower quality value stock fall.

Risk appetite and overall liquidity in the market also remain high, reducing the premiums investors demand for taking on riskier value stocks.

As Credit Suisse pointed out this week, growth stocks have lagged behind partly because earnings growth has been plentiful and so less valuable. It said there had been extreme convergence of both priceearnings multiples across the market and estimates of one-year forward earnings growth. But there was still a wide dispersion of estimates for earnings over three and five years as well as return on equity.

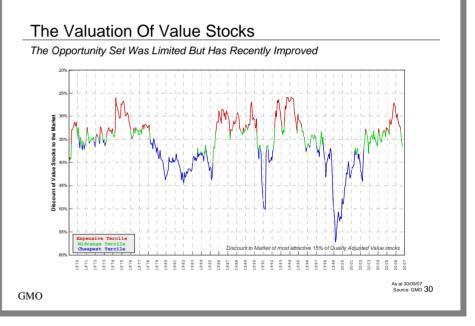
"We believe that investors will focus more on these longer term parameters and thus re-rate growth companies," it said. It added that, with overall profit growth slowing, the premium on sustainable growth would rise as it became a scarce commodity.

GMO's candour in acknowledging the expensiveness of value stocks testifies to a genuine focus on investment performance rather than asset gathering, the discipline of its approach and its confidence, supported by academic evidence, that value stocks outperform growth shares over the long term.

The timing of a correction is hard to forecast, particularly given the high level of liquidity in the market. But it is likely value fund managers will face a tougher time soon.

 managers to identify
 tony.tassell@ft.com

 FT Article, November 2006

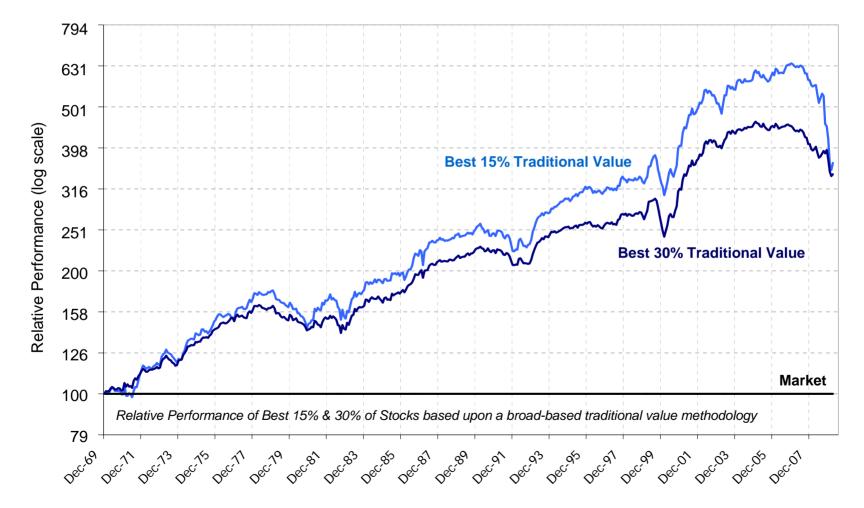


#### Exhibit Taken From Shetlands Presentation In Dec 2007

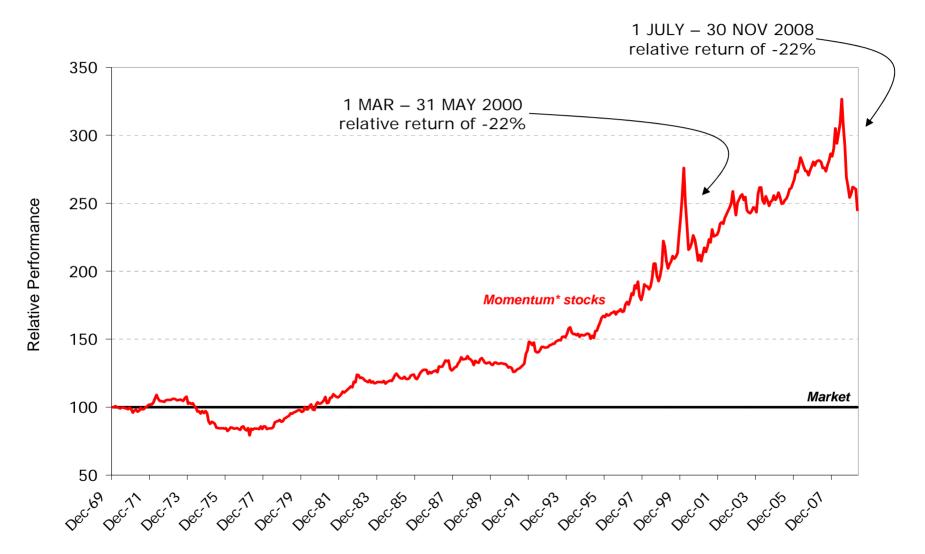
618

## Traditional Value Has Continued Its Poor Run

Relative Performance of Traditional Value (1969-2009)



#### Momentum Has Held Back Overall Performance



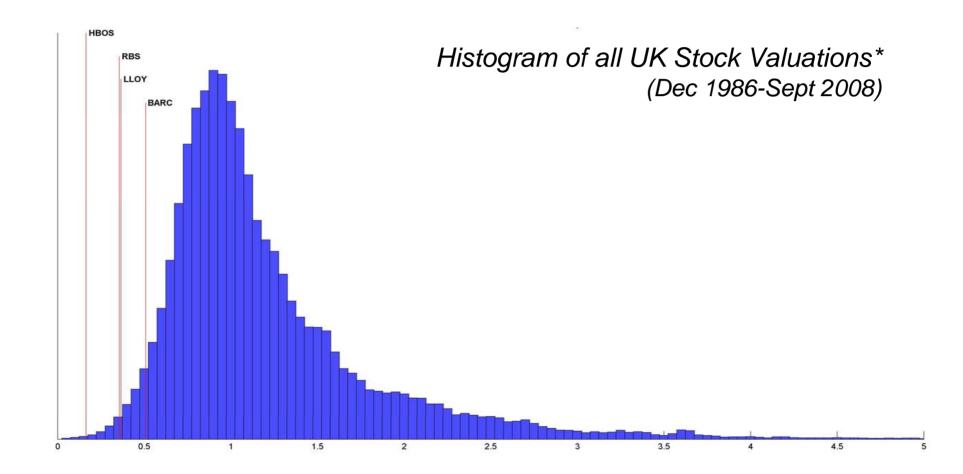
*Note*: Performance data quoted represents past performance and is not indicative of future results \*Momentum is defined here as best 15% (by market cap) trailing six month price return using market cap weighting sliced 9 months

GMO

15

#### Domestic Banks -Probably The Biggest "Value Trap" Of Our Careers

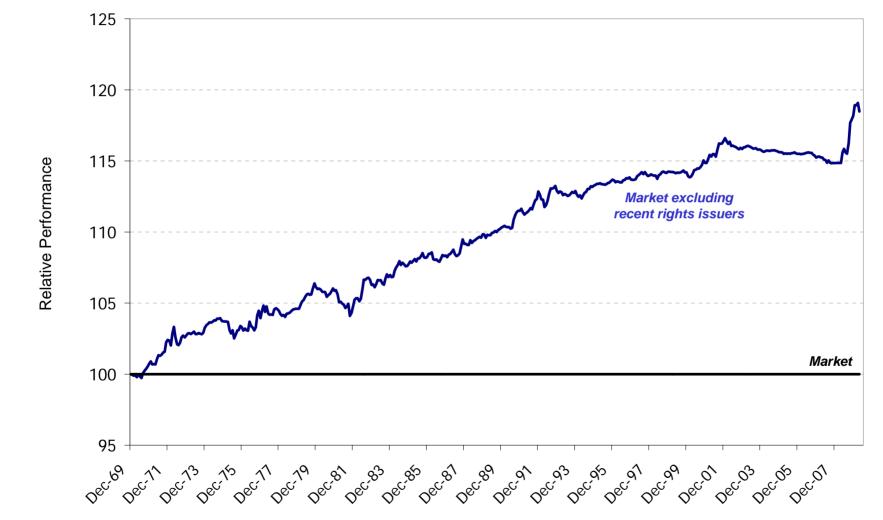
Penalising rights issuers has been tremendously beneficial



\*Valuation uses GMO's quality adjusted valuation methodology but before any quality adjustment

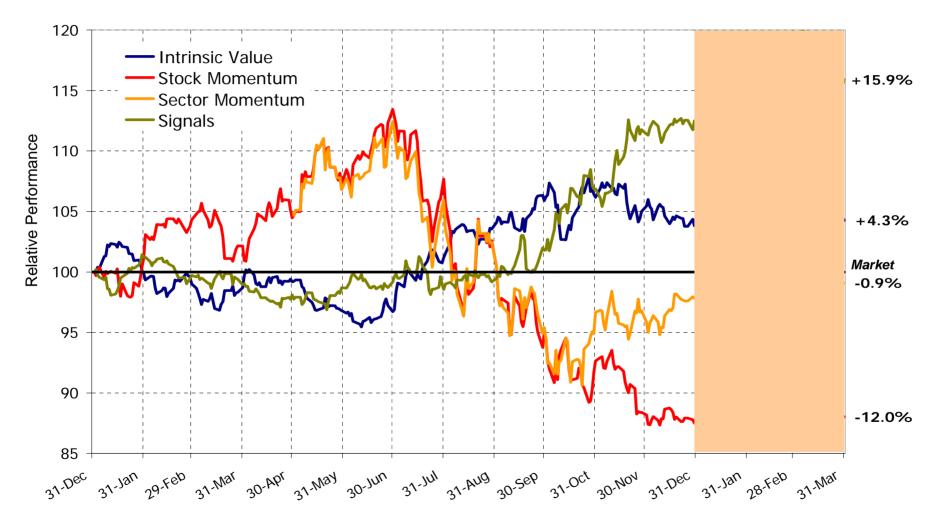
Source: Thomson Financial/GMO Data as at 30 September 2008

#### Performance Of Market Ex Rights Issuers



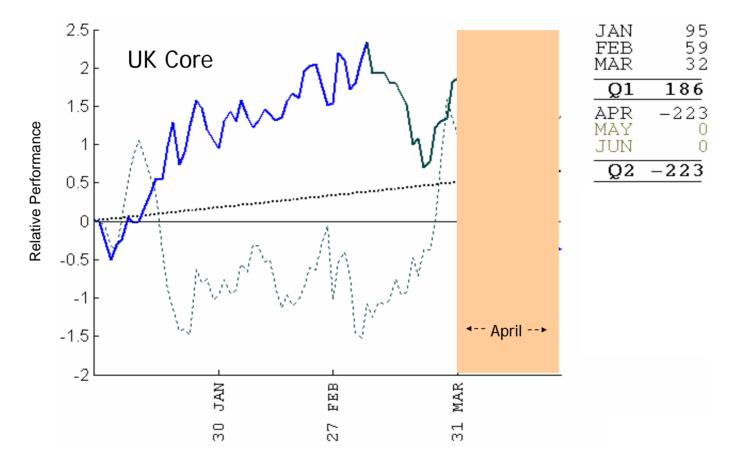
## Which Techniques Have Performed Better (UK Core)?

Relative performance of portfolio stock selection strategies, post optimisation



#### UK EQUITIES Performance Review 1<sup>st</sup> April 2009 onwards

#### Performance Update – April 2009



Source: GMO

I.

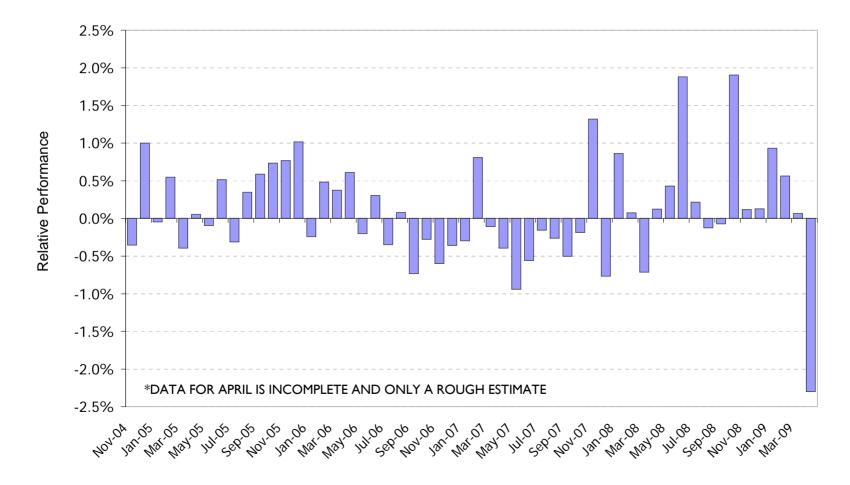
- 625 -

Data as at 24th April 2009; Performance numbers are not as reported but are an internally generated approximation

GMO Note: Performance data quoted represents past performance and is not indicative of future results.

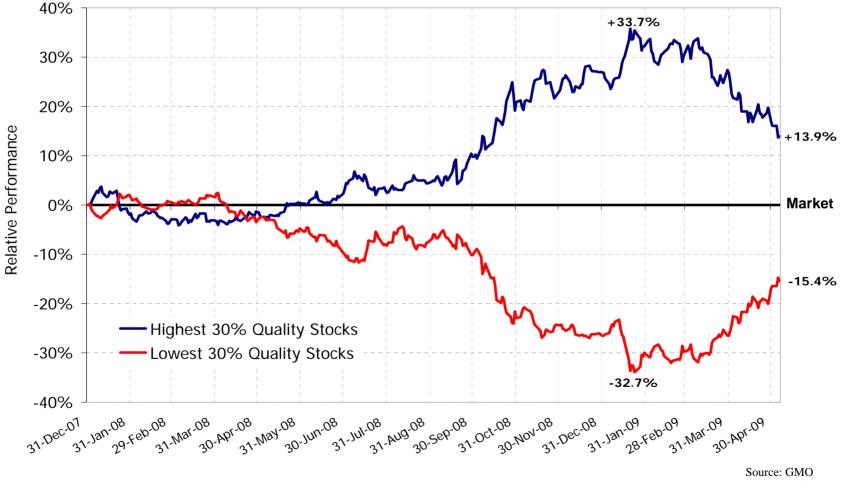
#### April\* Will Probably Be The Strategy's Worst Month

UK Core Relative Returns (Nov 2004-Apr 2009)

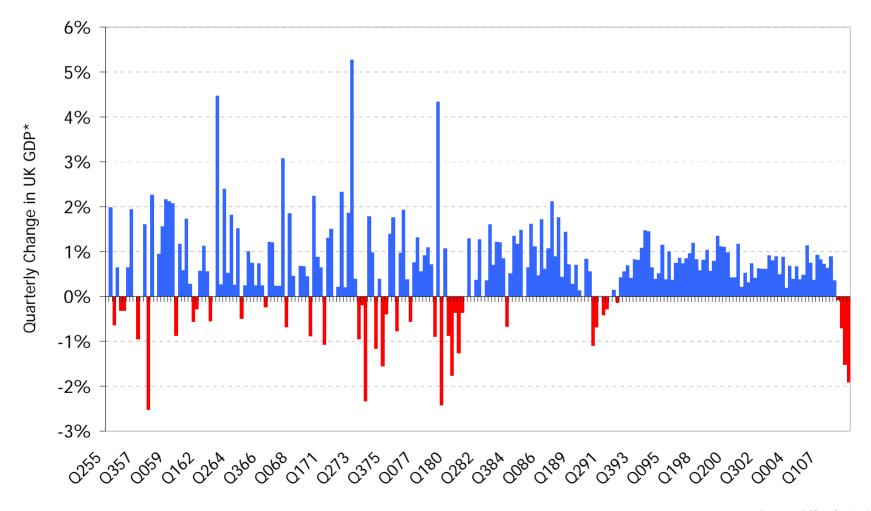


### Quality Has Lost Half Of Its Performance Advantage

Relative Performance of Low and High Quality Stocks



#### Has The News Flow Picked Up Yet?



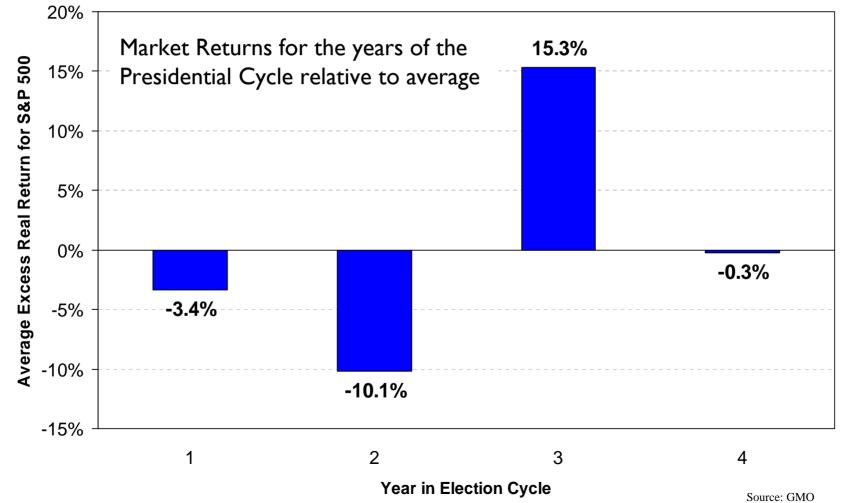
\*GDP data is seasonally adjusted

GMO

Source: Office for National Statistics Data as at 31 March 2009 23

## The US Stock Market And The Presidential Cycle

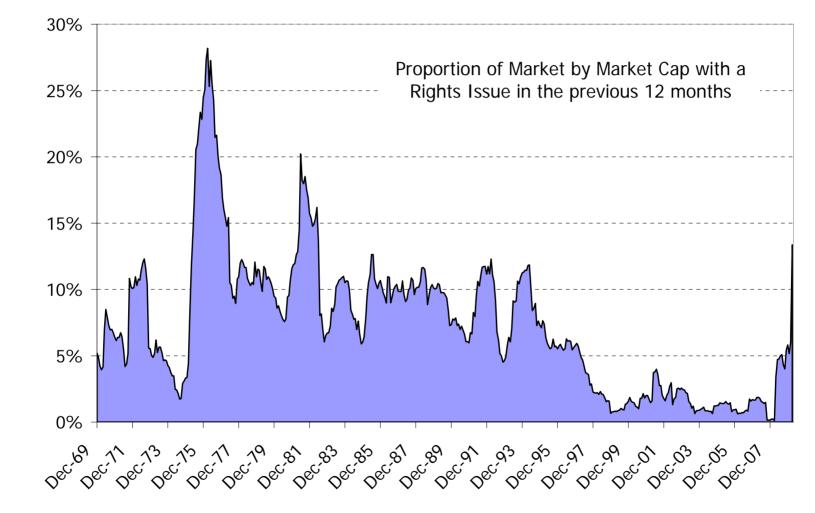
Data covers the period 1933-2007



Data as at 30 Sept 2007

## UK EQUITIES Outlook and Portfolio Positioning

#### **Rights Issuance Is Picking Up Again**

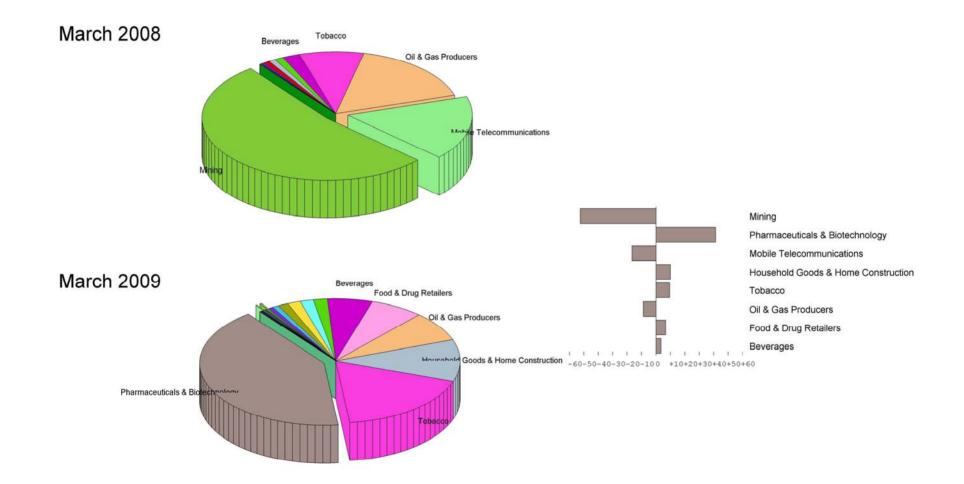


Proportion of Market

26

# The Changing Shape Of Momentum - By Industry

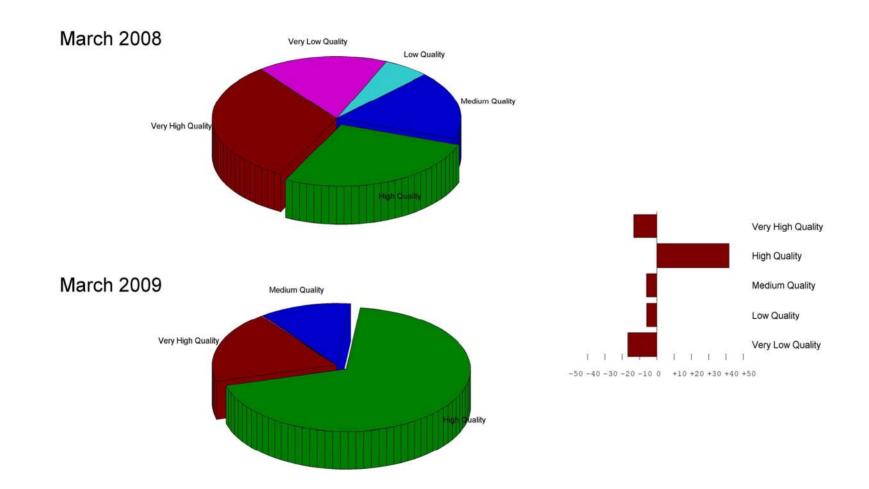
#### Composition of Sector Momentum Portfolios



1

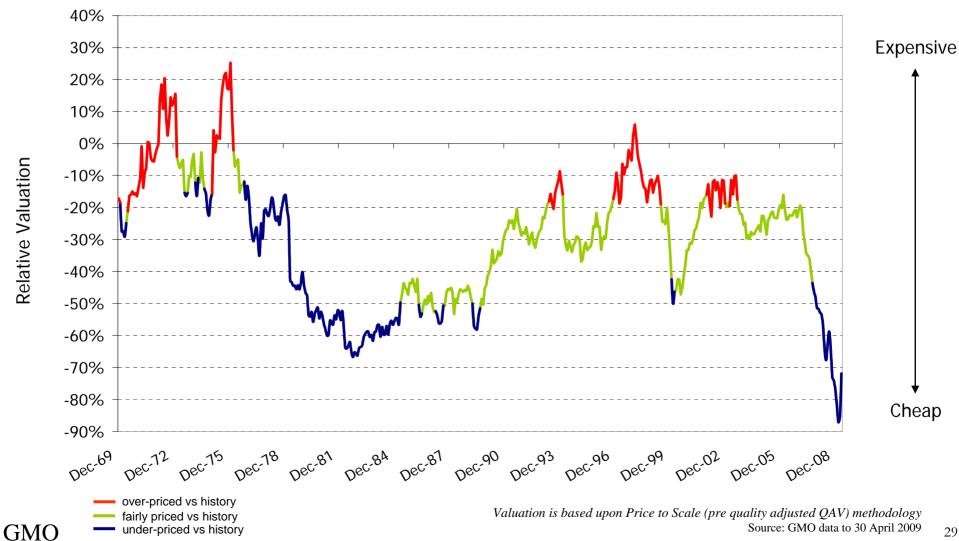
# The Changing Shape Of Momentum - By Quality

#### Composition of Sector Momentum Portfolios



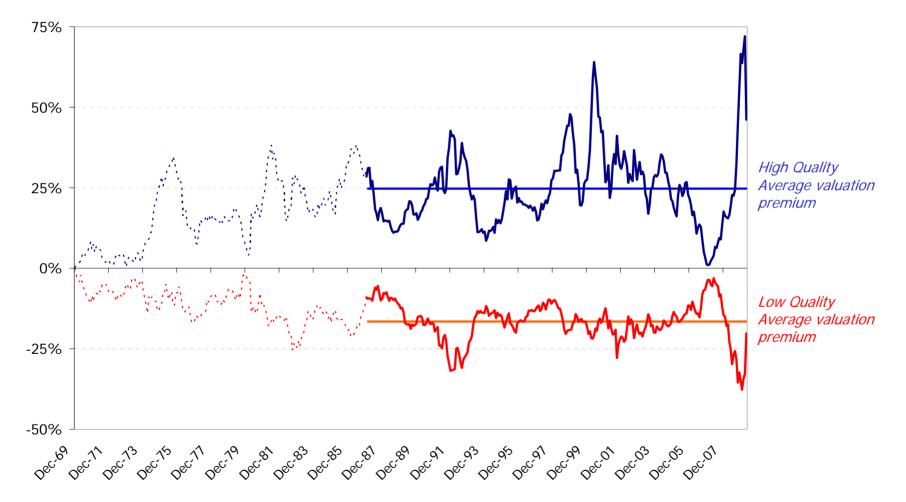
## **Difficulties In Valuing Companies Persist**

All UK Domestic Banks (All Banks ex HSBC & Standard Chartered)



#### Quality Doesn't Look As Cheap anymore

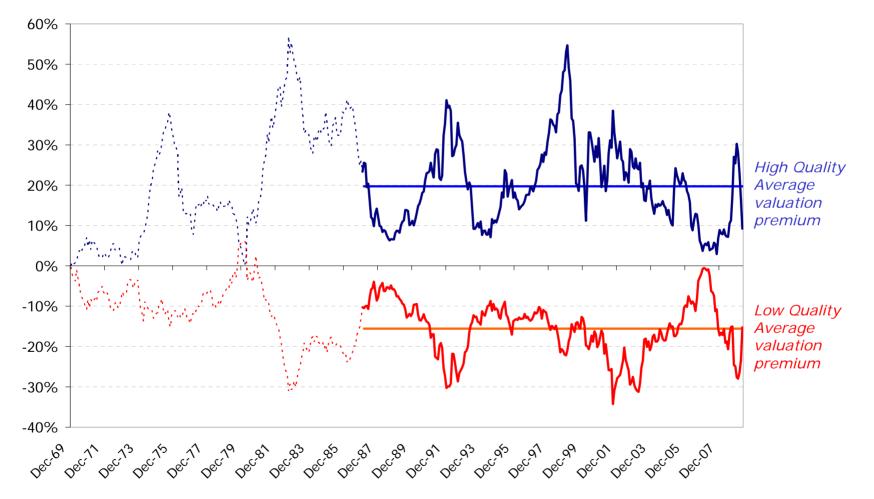
#### Valuation of Quality\* stocks



\*Valuation uses Price to Scale (pre quality adjusted QAV) methodology Quality stocks are defined as best/worst 30% using market cap weighting sliced 12 months As at 30 April 2009 Source: GMO

## Although Quality Looks More Appealing Ex Banks

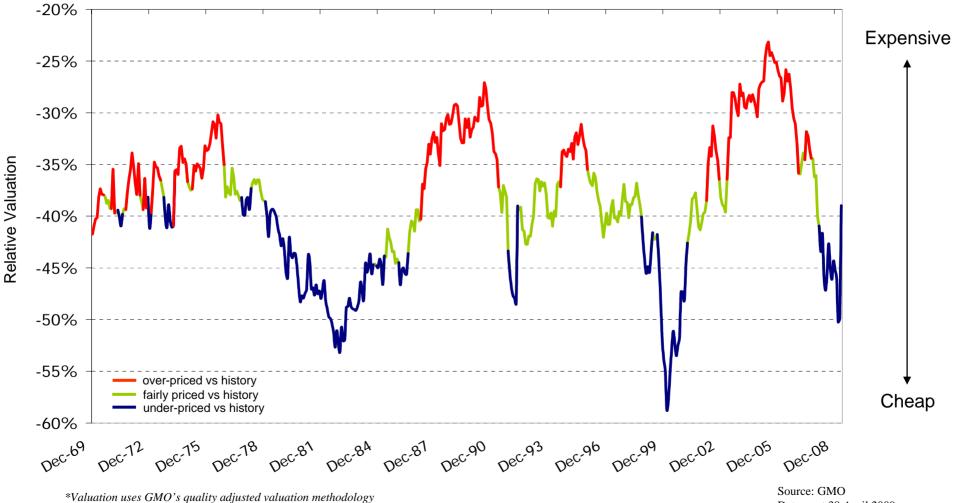
#### Valuation of Quality\* stocks excluding Banks



\*Valuation uses Price to Scale (pre quality adjusted QAV) methodology Quality stocks are defined as best/worst 30% using market cap weighting sliced 12 months As at 30 April 2009 Source: GMO

#### Is It Time To Buy Traditional Value Yet?

#### Valuation of Value\* stocks

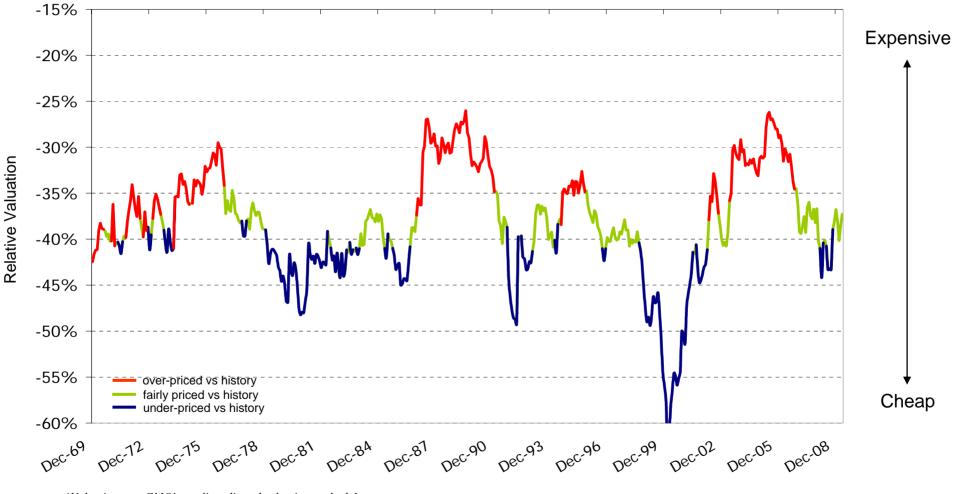


Value stocks are defined as best 15% (fuzzy from 5% to 25%) using float adjusted market cap weighting sliced 12 months **GMO** 

Data as at 30 April 2009

## Is It Time To Buy Traditional Value Yet?

Valuation of Value\* stocks excluding Banks

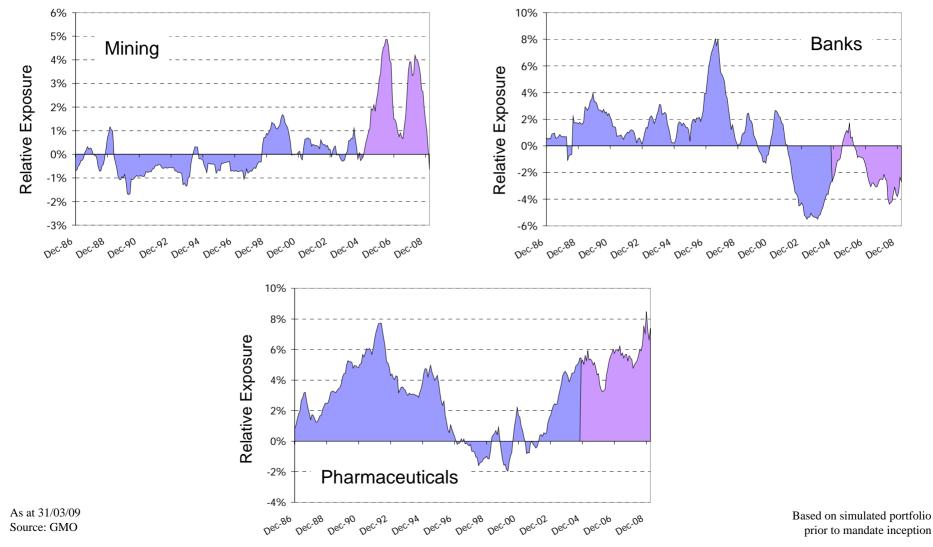


\*Valuation uses GMO's quality adjusted valuation methodology

GMO Value stocks are defined as best 15% (fuzzy from 5% to 25%) using float adjusted market cap weighting sliced 12 months

Source: GMO Data as at 31 March 2009

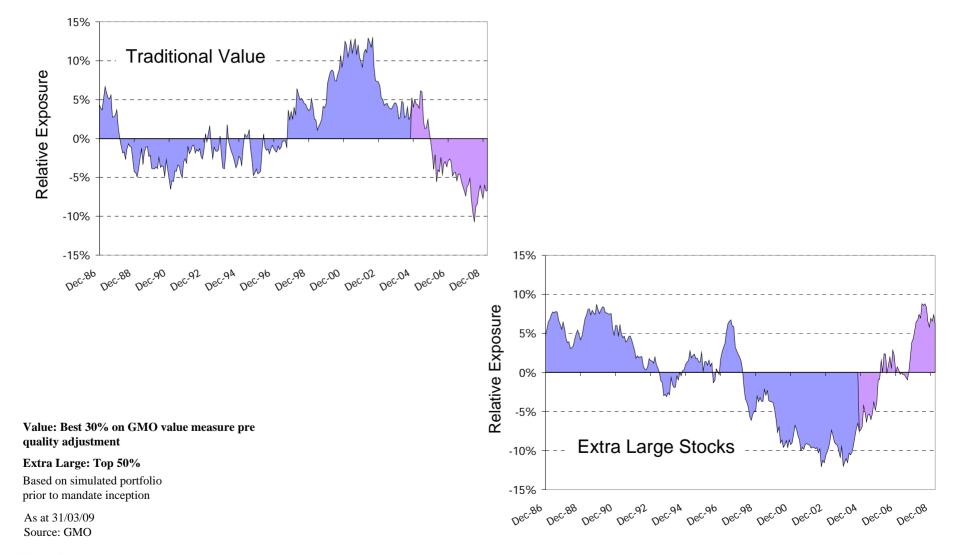
#### UK Core - Exposure Histories Of Various Sectors



**GMO** 

34

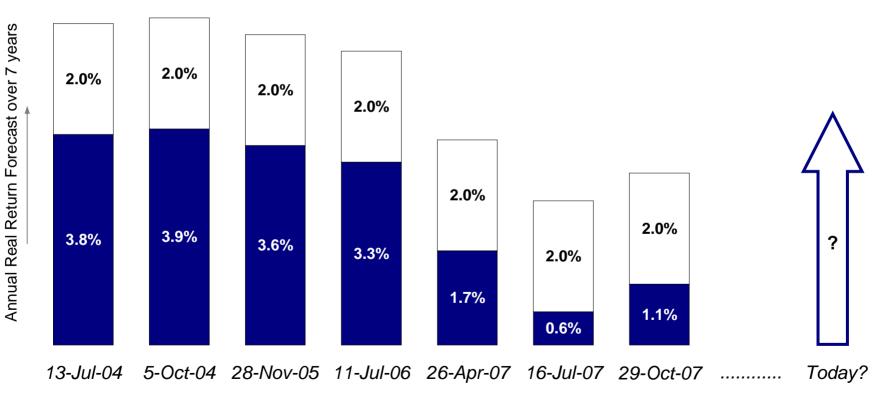
#### UK Core - Historic Exposure To Traditional Value & Large



## We've Been Bearish On Equity Markets For Some Time ...

Previous GMO 7 year real return forecasts (2004-2007)

- Expected Value Added - Real Return (Asset Class Index)



Forecasts are all taken from previous client presentations

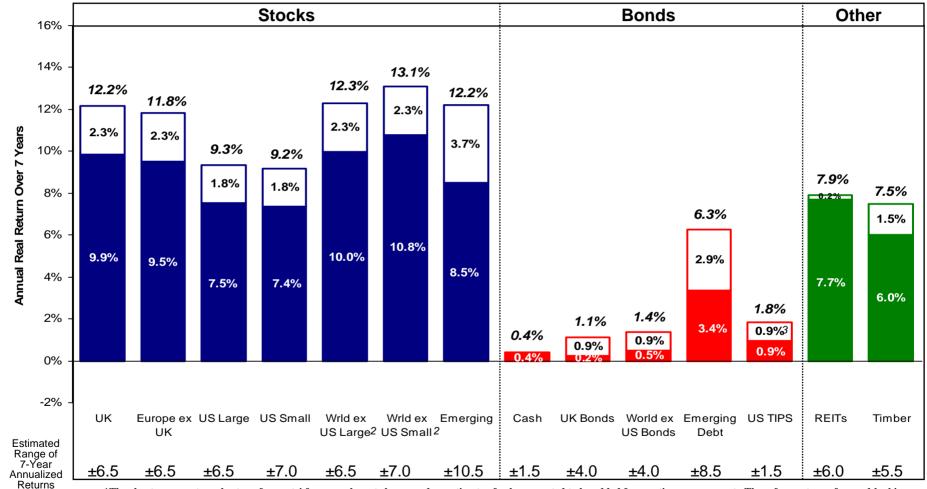
· 641 -

Source: GMO

## GMO 7-Year Asset Class Return Forecasts<sup>\*</sup>

#### As of 31 March, 2009

- Expected Value Added - Real Return (Asset Class Index)



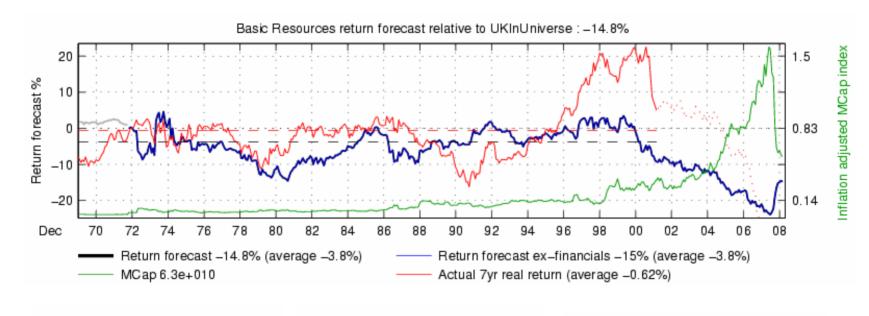
\*The chart represents real return forecasts<sup>1</sup> for several asset classes and an estimate of value expected to be added from active management. These forecasts are forward-looking statements based upon the reasonable beliefs of GMO and are not a guarantee of future performance.

<sup>1</sup> Long-term inflation assumption: 2.5% per year.

<sup>2</sup> Return forecasts for World ex US equities are ex-Japan.

<sup>3</sup> Alpha transported from management of global bonds.

#### **Real Return Forecasts – Mining Stocks**





· 643 -

## UK EQUITIES Process Changes & Research

- Updated Quality Methodology & Implementation
- Introduction of Book Proxy & Free Cashflow to QAV
- Introduction of Sector Momentum\*

\*Sector Momentum was implemented in UK Core in Q2, UK High Yield in Q3 and UK Value in November

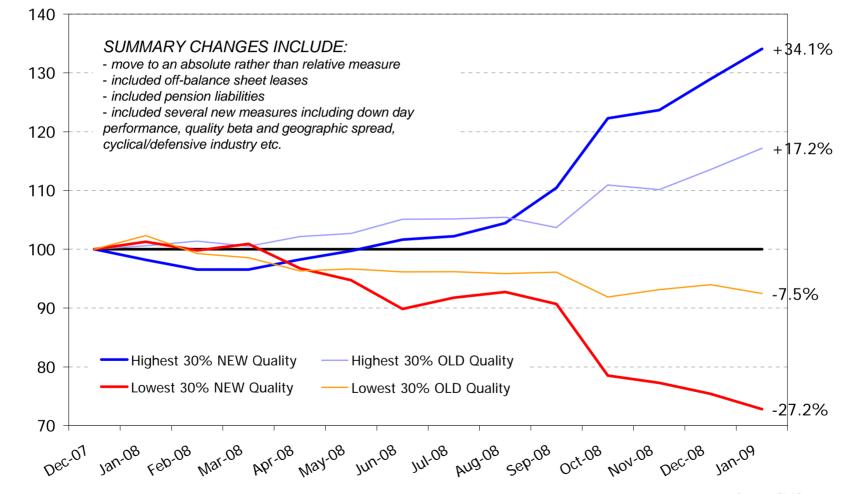
645

### Revised Quality Methodology

36%	VOLATILITY	x1 x1 x1 x1 x1 x1	EPS (adjusted) volatility RoBP volatility Cash Inflow volatility IBES Forecast EPS volatility Cyclical/Defensive Nature of Business
21%	GEARING	x0.5 x1 x1 x0.5	Total Liabilities to Book Proxy Debt to Book Proxy Forecast Interest Cover (P&L) Forecast Interest Cover (Cashflow)
21%	MARKET	x0.5 x0.5 x1 x1	Analyst spread of estimates Down Day Performance Quality Beta Largest 1 day relative fall
18%	PROFITABLTY	X2.5	Historic & Forecast Time Weighted RoBP
4%	DIVERSIFCTN	x0.5	Geographic Spread
		var	Pension Fund Exposure

## **Reviewing Recent Changes - Quality**

New Quality methodology has proved to be a significant improvement



Source: GMO Data as at 31 January 2009

- 647 -

**Relative Performance** 

## **Reviewing Recent Changes – Sector Momentum**

Relative performance of momentum stock selection strategies, post optimisation



**Note:** Performance data quoted represents past performance and is not indicative of future results Assumes no transaction costs; excludes impact of cash holdings; data to 31 December 2008

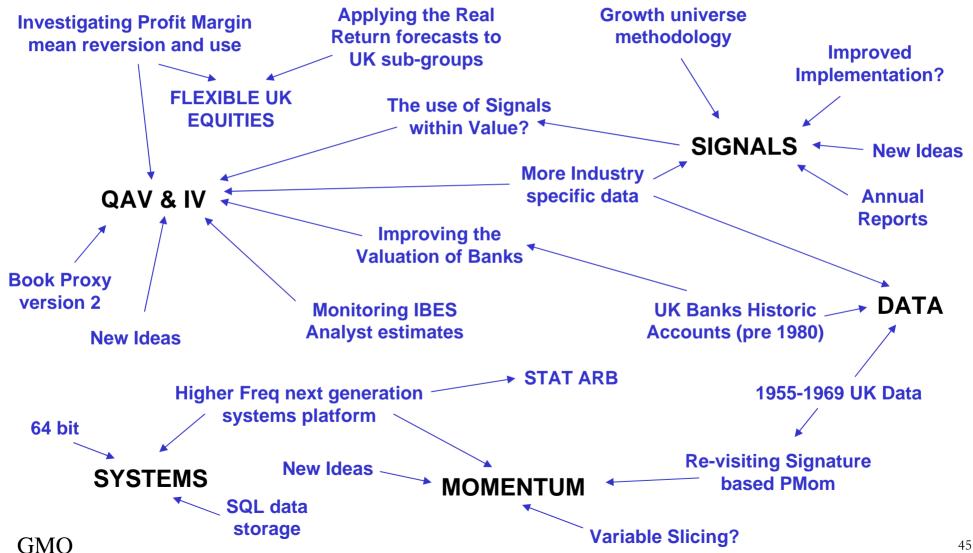
648 -

# Kicking The Tyres Of The Investment Process

- Dividends: Can we really believe the quoted yields?
   Set Domestic Bank dividends to zero
- Historic Accounts: There is a risk that the data is out of date Particularly an issue for Mining stocks (Modified Sales and Earnings data)
- Momentum: Is historic (sliced) momentum still useful? Momentum continues to move into Quality
- IBES Data: Reacting quickly enough to changing events? Not so far, needs monitoring

# **Research** Projects

. 650

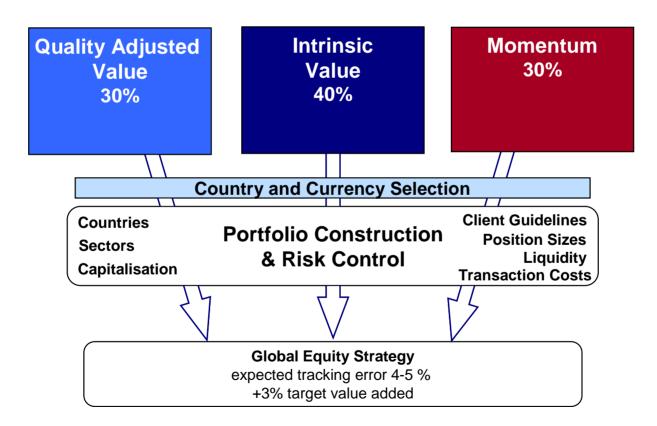


### WORLD EX-UK EQUITIES Performance Review

## **Our Investment Process**

Three diversifying approaches to stock selection

GMO Global Universe 3,000 + companies in developed markets



# In Early 2008 We Allocated To US High Quality Stocks

Motivated by broad valuation



### The High Quality Allocation Worked Well

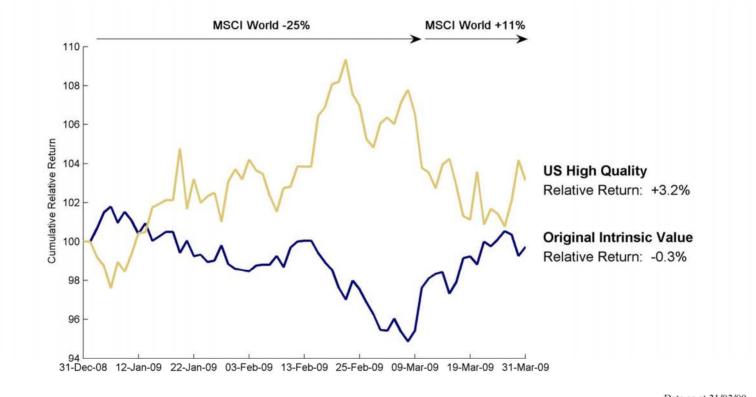
High quality stocks outperformed value stocks in the US in 2008



Relative returns of Intrinsic Value within the US for GMO World ex-UK Equity Fund

Data as at 31/12/08 Source: GMO

### High Quality Stocks Underperformed The Rally

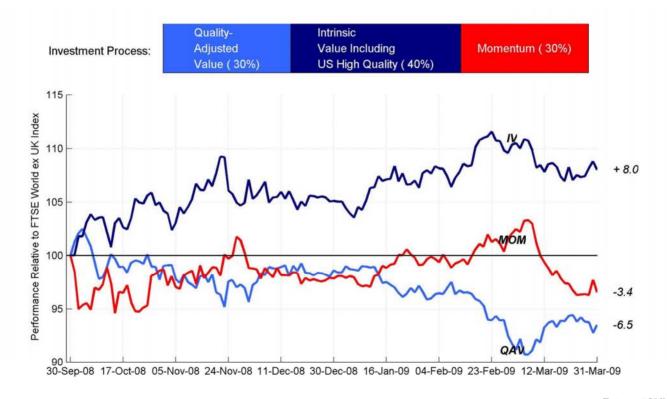


Relative returns of Intrinsic Value within the US for GMO World ex-UK Equity Fund

Data as at 31/03/09 Source: GMO

# Performance Of The Stock Selection Disciplines

Since September 2008



GMO World ex-UK Equity Fund - Approximated performance of sub-portfolios Approximated performance is calculated assuming instantaneous trading without transaction costs, fees or cash flows. Data as at 31/03/09 Source: GMO

## Q1 2009 FX Rate Changes Were The Reverse Of 2008

Japan and Switzerland try to join the race to the bottom

Calendar 2008

JAPANESE YEN JAPANESE YEN -8.2% +23.3% SWISS FRANC +6.1% SWISS FRANC -6.4% SINGAPORE DOLLAR +0.7% SINGAPORE DOLLAR -5.2% US DOLLAR US DOLLAR DANISH KRONE -4.0% DANISH KRONE -4.5% -4.2% -4.5% EURO FURO SWEDISH KRONA SWEDISH KRONA -17.4% -4.3% CANADIAN DOLLAR -18.1% CANADIAN DOLLAR -1.9% AUSTRALIAN DOLLAR -19.7% AUSTRALIAN DOLLAR -0.3% NORWEGIAN KRONE -21.8% NORWEGIAN KRONE +3.7% NEW ZEALAND DOLLAR-24.4% NEW ZEALAND DOLLAR -2.3% BRITISH POUND6.5% **BRITISH POUND** -0.3% -30% -20% -10% +10%+20% +30%-10% -5% +0%+5%

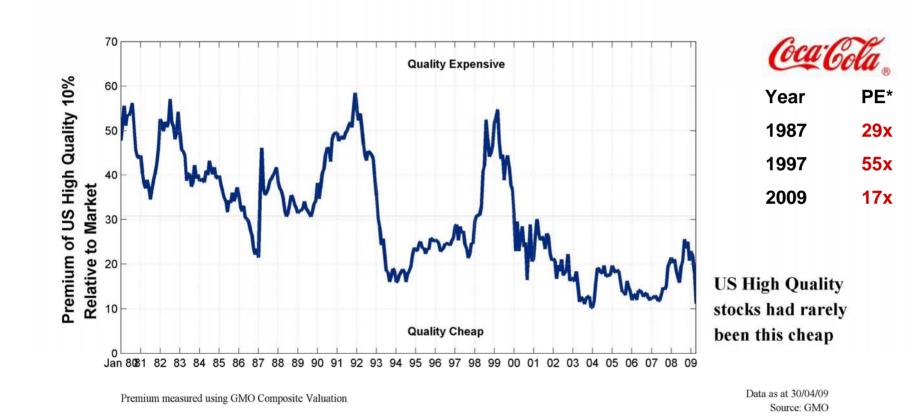


Change in FX rate against US Dollar

Source: GMO Data as at end March 2009

# WORLD EX-UK EQUITIES Outlook & Portfolio Positioning

### High Quality Stocks Got To Very Cheap Levels In 2007



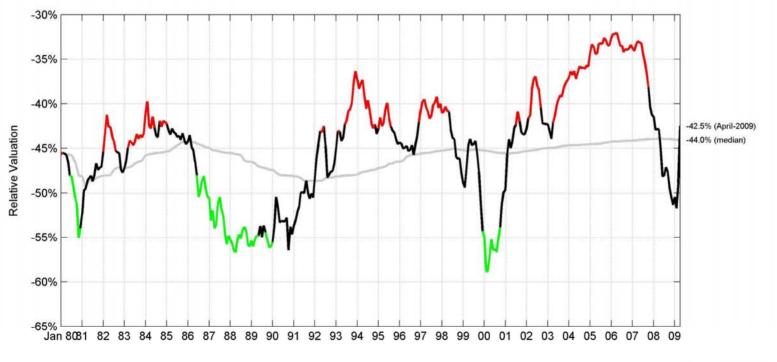
GMO defines quality on the basis of balance sheet strength, stability and profitability.

\*Normalised

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# Value Stock Were Trading At Record Highs In 2006/7

Value stocks appear to be better positioned now

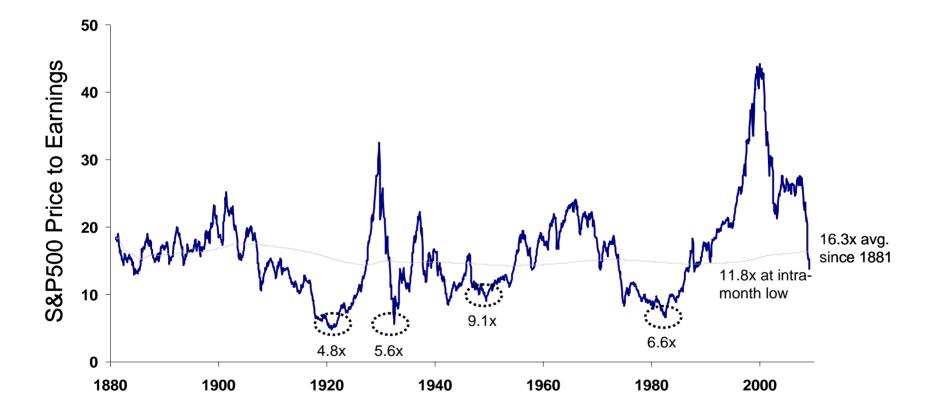


Discount of 10% cheapest stocks globally using GMO Composite Value

Data as at 30/04/09 Source: GMO

# Valuation: Markets Are Cheap, But Not Extremely So

The pull of mean reversion is not strong from here



Data show price to 10 year real average earnings of S&P 500 Index and its predecessors

Source: Shiller, Napier, GMO Data as at end March 2009

· 661 -

### **Top 15 Stock Positions**

Portfolio positions based on value dominate top holdings

	Quality-			
	Adjusted	Intrinsic		
	Value	Value	Momentum	Total
JOHNSON & JOHNSON	2.1	1.9		4.0
WAL-MART STORES INC		1.4	1.7	3.0
COCA-COLA CO		2.3		2.3
PFIZER INC	2.2			2.2
TOTAL	1.7		0.1	1.8
ENI	1.0	0.6	0.1	1.7
PEPSICO INC		1.6		1.6
ABBOTT LABORATORIES		0.9	0.6	1.4
MERCK & CO	0.7	0.7		1.4
NOVARTIS	0.2	0.6	0.5	1.4
BNP PARIBAS	0.7	0.7		1.4
GOOGLE INC		1.2		1.2
SANOFI-AVENTIS	0.4	0.7	0.1	1.2
LILLY (ELI) & CO	0.6	0.4		1.1
INTL BUSINESS MACHINES CORP		0.4	0.7	1.0

GMO World ex-UK Equity Fund Portfolio holdings are subject to change and should not be considered a recommendation to buy individual securities

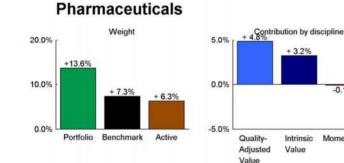
Data as at 31/03/09 Source: GMO

# **Top 4 Industry Overweights**

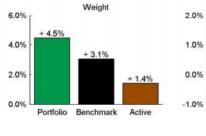
Pharmaceuticals represents the largest industry overweight in the portfolio

-0.1%

Momentum



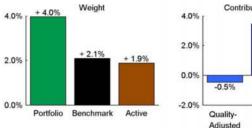
#### Food & Staples Retailing

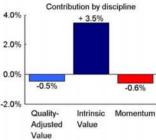




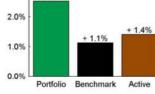
GMO World ex-UK Equity Fund

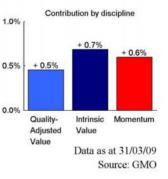
**Beverages** 

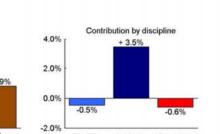




**IT Services** Weight 3.0% + 2.5%









# **Top 4 Industry Underweights**

Banks represents the largest industry underweight in the portfolio

Contribution by discipline

-0.7%

Intrinsic

Value

-0.7%

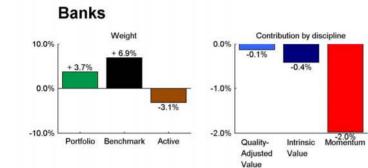
Quality-

Adjusted

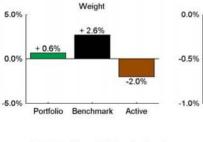
Value

-0.4%

Momentum

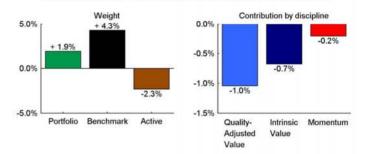


#### Food Products

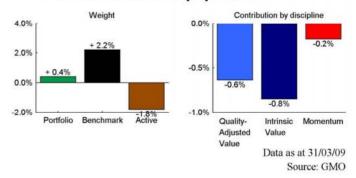


GMO World ex-UK Equity Fund

**Diversified Telecommunication Servic** 



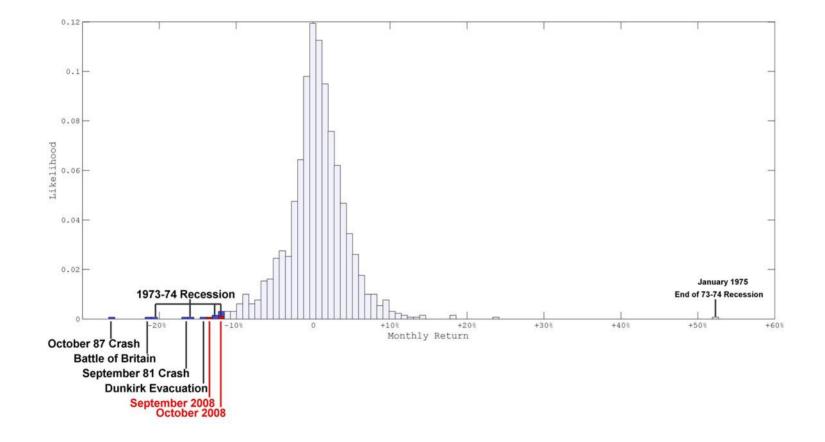
#### **Communications Equipment**



Appendix

# Putting September/October Into Historical Perspective

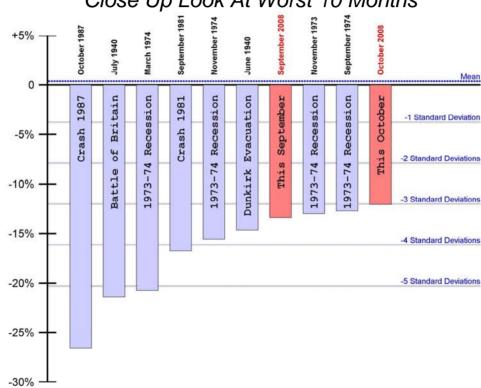
In the All-time Bottom Ten



Source GMO, As at 31st October 2008

# Putting September/October In Historical Perspective

Just how bad has September & October been?



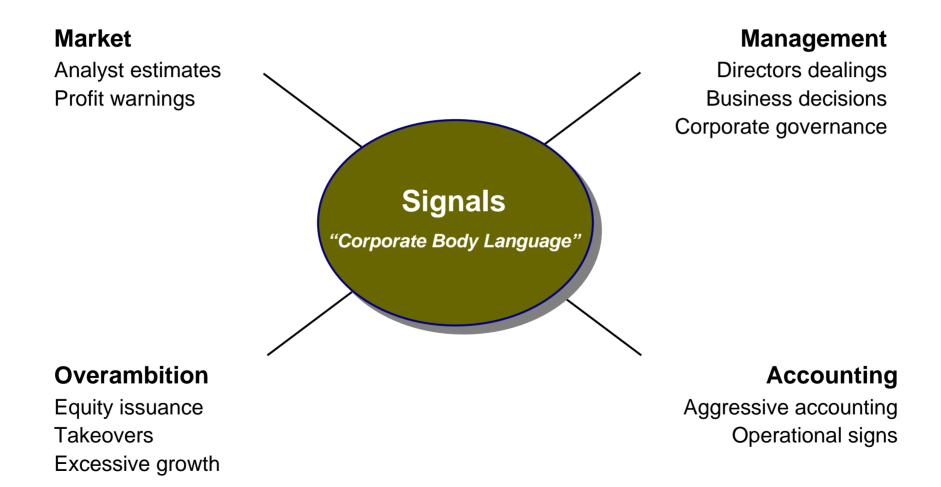
#### Close Up Look At Worst 10 Months

- 667

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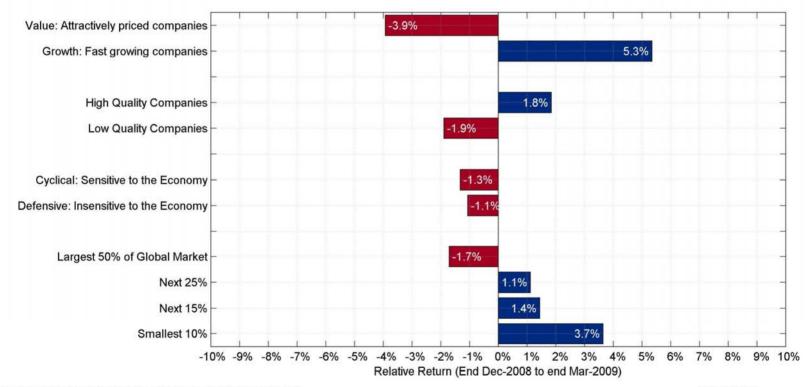
# Signals Discriminate Within Growth

Corporate Body Language



- 668 -

## Global Market Drivers - Q1 2009



Each sector comprises 30% of developed markets except where indicated

Source: GMO



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