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### The Government Pension Fund Global

The Government Pension Fund was established on 1<sup>st</sup> January 2006. The Government Pension Fund comprises: The Government Pension Fund Global (previously the Government Petroleum Fund, established in 1990) and The Government Pension Fund – Norway (The National Insurance Fund, established in 1967). This report only relates to The Government Pension Fund Global.

## Introduction

At the request of the Ministry of Finance, WM Performance Services, a State Street business, have reviewed the investment returns and associated investment risk of the Government Pension Fund Global. The review covers Total Assets, Total Bonds and Total Equities.

## Rolling Years with Relative Risk (Schedules 1, 3 & 5)

These charts identify short term trends in benchmark relative performance and risk.

The top chart plots the Fund's benchmark relative quarterly performance. The middle chart shows the Fund's benchmark relative performance for the three year annualised period to each quarter end. The bottom chart displays the benchmark relative investment risk and the information ratio; this ratio is frequently used as a measure of 'skill' but must be interpreted with caution.

### Relative Risk Analysis (Schedules 2, 4 & 6)

The charts give context to the Fund's results by placing them against backdrops that comprise the investment experiences of other large multi-asset institutional funds including; large European pension and life company funds, US state retirement plans and Sovereign Wealth Funds. The aggregate market value of these funds at the end of December 2009 exceeded NOK 9,057 billion. By value, 52% of the funds are domiciled in Europe.

In the scatter-grams, each fund's result is represented by a circle. The green circles show the position of the fifteen largest funds, ranging in size from NOK 1,200 billion to NOK 90 billion, with an average value of NOK 410 billion. Red circles cover funds with values ranging from NOK 82 billion to NOK 19 billion; the average value is NOK 37 billion. The open circles are other, smaller, investors.

The risk and return scatter-gram plots the three-year annualised result for each fund relative to its own strategic benchmark. The strategic benchmarks are diverse in terms of the mix of assets (bonds, equity, real estate, alternatives etc.).

The strategic benchmark will define approximately 90% of each fund's absolute investment return and the associated investment risk. The benchmark relative risk and return captures the effect of tactical asset allocation and investment selection decisions.

Since the start of the global financial crisis in June 2007, market risk has risen sharply. With rising risk, the relative returns and risks are more diverse across all three backdrops; total assets, equities and bonds. Taking total assets as an example, the number of funds with three year benchmark relative risk in excess of 1.5% has increased from 25% to nearly 80%.

As risk has increased so too has the range of benchmark relative returns. Indeed, the spread of returns in 2009 is the widest we have recorded; the 2009 interquartile range of 3.6% compares with a range of 1.3% in 2006. This divergence of benchmark relative risks and returns has affected investors of all sizes.

Converting relative risk to extra return is not automatic; before fees, in the three year annualised period to the end of December 2009 almost three quarters of funds failed to match their benchmarks. Including fees, the proportion is closer to eighty five percent.

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The table below the scatter-grams gives the Fund's rolling three year annualised absolute and benchmark relative return and risk details for the last six years. Additionally, the information ratio (IR) is shown; this ratio can be either positive or negative. The IR expresses benchmark relative return as a proportion of benchmark relative risk - it is often considered a measure of 'skill'. From research conducted by WM an IR of 0.3 usually equates to upper quartile performance. Higher IR's are seen but not normally maintained – a period of relative outperformance is likely to be eroded by subsequent underperformance.

At the total fund level, the IR is the result of both tactical asset allocation (differences between the actual and strategic asset allocation) and investment selection (the return generated in each asset class relative to its particular benchmark).

The IR statistic must be treated with caution, if relative risk is very low a small variance in return will give a large IR, either positive or negative.

## Ranges of Relative Return and Risk

The charts at the foot of schedules 2, 4 and 6 summarise the dispersion of benchmark relative returns for all the funds in the backdrop in each of the last five years and also give the ranges of annualised benchmark relative returns and risk for the three and five year periods ending December 2009. The '0' on the x axis represents each fund's unique strategic benchmark and is the base point around which the dispersion of relative return and relative risk is displayed. The charts show the range of results from 5<sup>th</sup> to 95<sup>th</sup> percentiles with the interquartile range (25<sup>th</sup> to 75<sup>th</sup> percentiles) shaded.

In most years benchmark relative annual returns are quite evenly distributed around '0' (the benchmark). However, the total asset results for the last three years are skewed with marked underperformance in 2007 and 2008 followed by outperformance in the latest year. The three and five year ranges show almost three quarters of the funds analysed failing to reach their benchmarks.

Return dispersions for equities and bonds have similarities with total assets although the bond results are extreme compared to previous experience and expectation. Funds have given bond managers the scope to invest outside the strict confines of the benchmark. Many benchmarks are set with reference to Government bonds but the actual mandate permits investment in credit, emerging market debt and other higher yielding issues. These lower quality issues were severely marked down as the credit crisis unfolded in 2008 then rallied strongly in 2009.

### The Government Pension Fund Global - Return and Risk Evaluation

#### Total Assets (Schedules 1 & 2)

The most significant factor in defining the absolute level of the Fund's investment return and risk is the strategic benchmark. Past evaluation shows that the contribution from manager investment decisions can add or detract a relatively small amount to the return and risk of the investment strategy.

Investment markets fell dramatically from June 2007 until the first quarter of 2009. The credit crisis, which had its roots in the US sub-prime mortgage market, damaged the global economy and this translated into a flight from risk assets into the safety of high quality government bonds. Since March 2009 the equity and credit markets have rallied sharply. Investor confidence has improved as massive central bank intervention mitigated the effects of the banking crisis on the real economy. Although the global economy has slowed sharply, signs of recovery continue to support the equity and non-government bond markets.

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Market conditions over the past three years are such that funds have experienced investment returns at the extremes of their risk projections. Small deviations in market and security exposures relative to benchmark were magnified by high market volatility.

In 2009 the Fund returned 25.6% against the benchmark return of 21.5%; as schedule 2 shows, this is almost top decile relative performance.

As schedule 1 shows, the Fund's quarterly returns were close to benchmark until the middle of 2007. Relative performance then deteriorated rapidly before a sharp recovery in the nine months to the end of 2009. The annualised rolling three year returns are again close to, albeit below, the benchmark. The speed of relative deterioration and subsequent improvement is closely aligned to the relative performance of the Fund's bond investments.

Until the end of 2007 the rolling three year returns were well ahead of the benchmark and accompanied by low relative risk. The information ratios were exceptional but need to be treated with some caution as the benchmark relative risk was low.

While the Fund's relative risk has increased in recent periods, it is bottom quartile compared to its peers over the latest three and five year periods. Relative performance is comparatively strong, close to upper quartile over the five years and well into the upper half over the three years.

In 2009 the Fund received over NOK 169 billion of new money from the Government, this represented just over 7% of the value of the Fund at end December 2008 (NOK 2,275 billion) – by comparison, most large funds have cash flows that are less than 5% of initial value.

## **Total Equities** (Schedules 3 & 4)

Equity markets rallied strongly in 2009 but are still almost 25% below the levels reached just before the credit crisis began. The quarterly performance chart identifies the third quarter of 2008 as critical to the Fund's relative performance. This was the quarter in which there were a number of high profile financial sector rescues and Lehman Brothers filed for bankruptcy protection.

Outperformance throughout 2009 takes the fund's rolling three year result back ahead of the benchmark. Relative risk is bottom quartile and accompanied by relative performance that is close to upper quartile. The five year result is very similar with lower quartile risk and upper quartile performance.

The performance in most quarters and over the longer term periods is highly creditable – it is rare to see a well diversified fund showing the consistency of outperformance evident in the relative returns. The relative risk is close to index tracking; this should be expected given the level of manager diversification. However, it confirms that there is not some form of structural or style bias – the manager results cannot be highly correlated.

### Total Bonds (Schedules 5 & 6)

Bond performance has driven the Fund's relative performance in the last two years. In 2008 high quality government bonds were supported as investors sought safety. Corporate and lower quality bonds experienced major falls in value as investors required significantly higher yields as compensation for the default risk. Index Linked issues also lagged as concerns grew about the possibility of deflation. In 2009 the situation reversed, the yield gap between low and high quality bonds rapidly tightened and the threat of inflation returned.

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The Fund's performance pattern implies that the assets were positioned away from the benchmark. Poor relative performance in 2007 and 2008 is largely recovered by strong performance in 2009. The performance deviations in the last two years are extreme but it is notable that other very large investors have had similar experiences.

With the relative volatility experienced in the last two years the bond section's three year relative risk has increased from 0.5% to 2.5%. This level of risk is upper quartile. Despite the extreme volatility and the dispersion of the annual relative returns the three and five year performance numbers for both Fund and peer group are remarkably close to benchmark.

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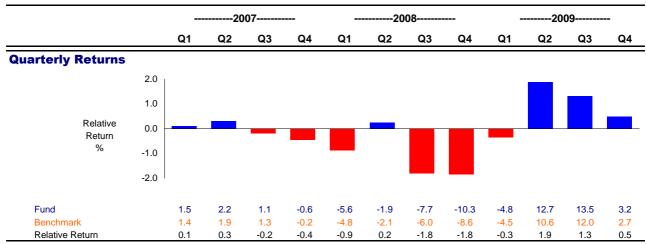
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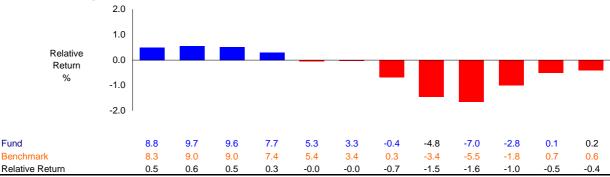
Rolling Years with Relative Risk **Total Assets** 

**Periods to end December 2009** Currency

This page details the longer term performance of the Fund, plotting it relative to the Benchmark set.

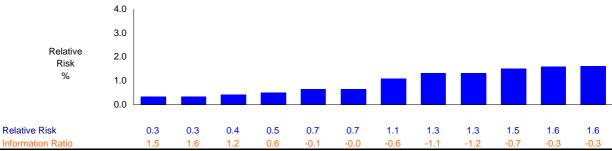


### **Annualised Rolling 3 Year Returns**



#### Rolling 3 Year Risk

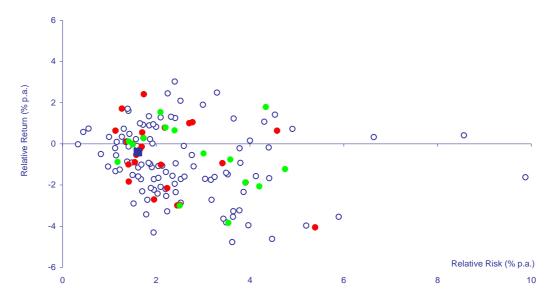
Fund



The relative return is the degree of out or underperformance of the Benchmark over these periods.

Relative risk measures the degree of fund performance deviation from benchmark. The larger the relative risk number the greater the monthly deviation from benchmark.

Information Ratio is often interpreted as a measure of manager skill in adding value over and above the benchmark.

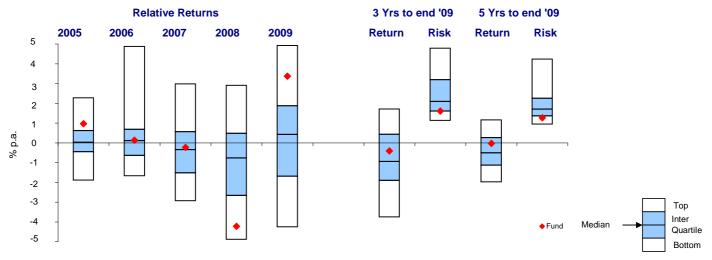


- O Each circle in the risk/return space represents a fund relative to its own benchmark.

Fund

Total Assets	Three Year Annualised figures as at end						
	Dec 04	Dec 05	Dec 06	Dec 07	Dec 08	Dec 09	
Absolute Risk & Return							
Fund Absolute Return	5.3	10.9	9.3	7.7	-4.8	0.2	
Fund Absolute Risk	5.3	4.0	3.3	3.6	9.7	12.5	
Benchmark Absolute Return	4.9	10.1	8.7	7.4	-3.4	0.6	
Benchmark Absolute Risk	5.3	3.9	3.2	3.3	8.7	11.2	
Benchmark Relative							
Return	0.4	0.7	0.5	0.3	-1.5	-0.4	
Risk	0.2	0.3	0.3	0.5	1.3	1.6	
Information Ratio	1.8	2.3	1.6	0.6	-1.1	-0.3	

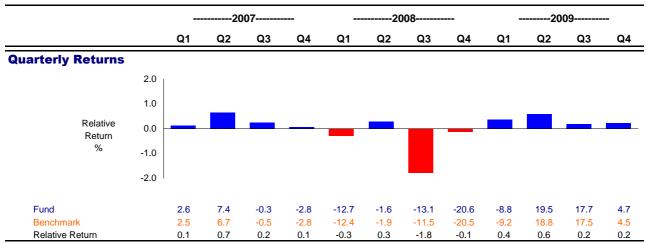
Ranges of Relative Return and Risk



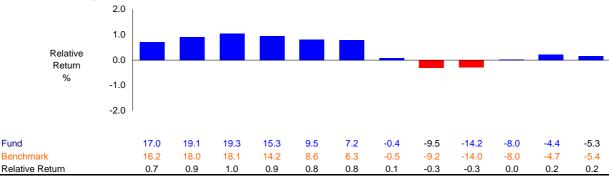
**Rolling Years with Relative Risk Total Equities** 

**Periods to end December 2009** Currency

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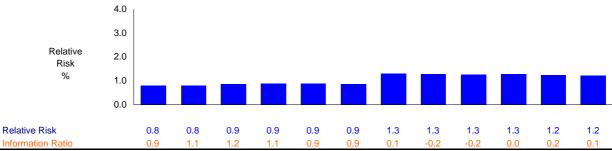


### **Annualised Rolling 3 Year Returns**



#### Rolling 3 Year Risk

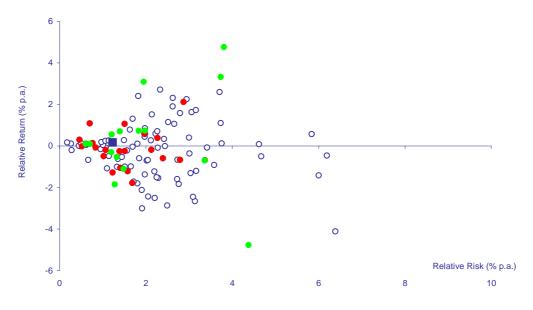
Fund



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Relative risk measures the degree of fund performance deviation from benchmark. The larger the relative risk number the greater the monthly deviation from benchmark.

Information Ratio is often interpreted as a measure of manager skill in adding value over and above the benchmark.



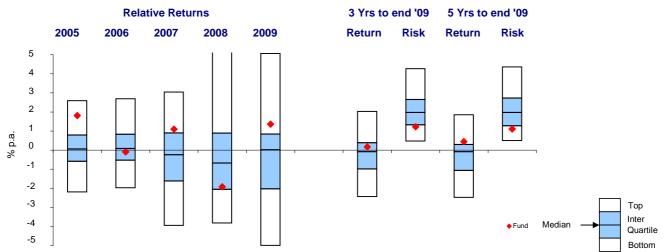
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 $\ensuremath{\bigcirc}$  Each circle in the risk/return space represents a fund relative to its own benchmark.

Fund

Total Equities	Three Year Annualised figures as at end						
	Dec 04	Dec 05	Dec 06	Dec 07	Dec 08	Dec 09	
Absolute Risk & Return							
Fund Absolute Return	1.6	19.4	17.4	15.3	-9.5	-5.3	
Fund Absolute Risk	15.5	9.6	7.6	8.7	17.9	21.4	
Benchmark Absolute Return	1.2	18.2	16.5	14.2	-9.2	-5.4	
Benchmark Absolute Risk	15.5	9.4	7.1	8.2	17.0	20.7	
Benchmark Relative							
Return	0.4	1.0	0.8	0.9	-0.3	0.2	
Risk	0.6	0.7	0.8	0.9	1.3	1.2	
Information Ratio	0.7	1.5	1.0	1.1	-0.2	0.1	

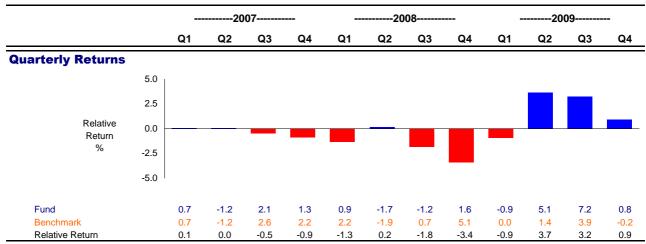
Ranges of Relative Return and Risk



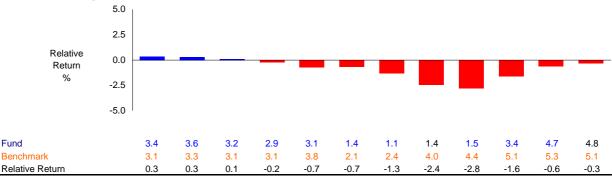
Rolling Years with Relative Risk **Total Bonds** 

**Periods to end December 2009** Currency

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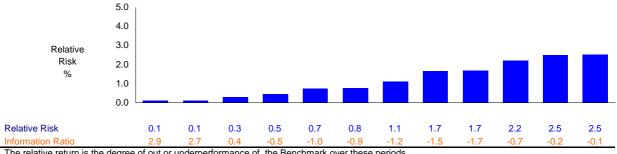


### **Annualised Rolling 3 Year Returns**



#### Rolling 3 Year Risk

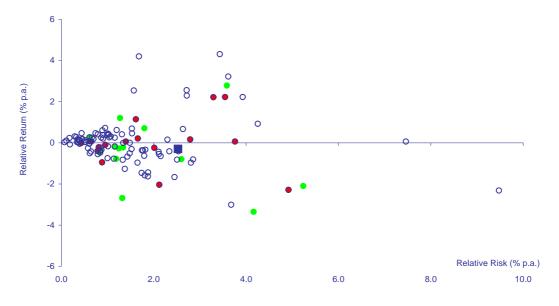
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Information Ratio is often interpreted as a measure of manager skill in adding value over and above the benchmark.



O Each circle in the risk/return space represents a fund relative to its own benchmark.

Fund

Total Bonds	Three Year Annualised figures as at end							
	Dec 04	Dec 05	Dec 06	Dec 07	Dec 08	Dec 09		
Absolute Risk & Return								
Fund Absolute Return	7.1	5.1	3.9	2.9	1.4	4.8		
Fund Absolute Risk	3.7	3.4	2.6	2.4	4.2	5.0		
Benchmark Absolute Return	6.6	4.6	3.6	3.1	4.0	5.1		
Benchmark Absolute Risk	3.7	3.4	2.7	2.6	3.9	4.0		
Benchmark Relative								
Return	0.4	0.4	0.3	-0.2	-2.4	-0.3		
Risk	0.1	0.1	0.1	0.5	1.7	2.5		
Information Ratio	3.6	3.1	2.8	-0.5	-1.5	-0.1		

Ranges of Relative Return and Risk

