INTRODUCTION

- The total asset under management of the 8 public pension funds listed below is $3.5 trillion (Dec. 2014).
- Due to the importance of this money to its members, stability of annual growth rate and risk management are key concerns.
- After the global financial crisis in 2008, strategies of investment and risk management in global pension funds have changed.

RESULTS

Fig 2. Coefficient of variation comparison in pre and post crisis periods
- The less coefficient of variation means the more return of investment per unit of risk.
- Most funds show more stable and higher rate of return before the crisis, compared to after the crisis.

Fig 3. Relationship of rate of return between in 2008 and 2009
- The graph tends to show a negative correlation of rate of return between in 2008 and 2009.
- The data demonstrates that pension funds suffering greater losses during the crisis (2008) also saw stronger recovery after the crisis (2009).

Fig 4. Standard deviation of real rate of return in each period

RESULTS (Cont.)

Fig 5. Excess return compared to the benchmark
- For the benchmark, NYSE World Leaders Index (NWL) and PIMCO Global Advantage Bond Index (GLAD) are used.
- Pension funds show cyclical performance over the period.
- During the crisis in 2008, global pension funds outperformed the benchmark; however, right after the crisis, they underperformed and recovered in 2011.

Fig 6. CalPERS fixed external management fee reduction
- In FY 2010-11, external management fees comprised 90% of the $1.3 billion of total expenses.
- From 2010, CalPERS has reduced its external management fee approximately by 66 million dollars.
- The data is related to CalPERS’s reduction on hedge funds.

Fig 7. Increase in alternative investments after 2008

OBJECTIVES

- To compare risk-adjusted investment performance of public pension funds in 8 large developed countries from 2004 to 2013.
- To investigate recent investment trends among global pension funds before, during and after the 2008 financial crisis.

DATA

- The 8 countries include: Netherlands (ABP), Sweden (AP), Denmark (ATP), U.S (CalPERS), Canada (CPPIB), Japan (GPIF), Norway (GPF), and South Korea (NPS).

RESULTS (Cont.)

CONCLUSION

- After the financial crisis, many funds increased investment in alternative assets.
- The U.S shows increases in private equities from 10.1% to 14.5%. Canada increases in real estate from 6.8% to 16.9%.
- The U.S and Netherlands decreased fixed income; but Canada and Sweden decreased equities to increase alternative assets

- When the financial market is in crisis, it globally influences performances of pension funds.
- Funds that suffered the greatest losses during the crisis also saw the strongest recovery after the crisis.
- Due to aftermath of the crisis, pension funds underperformed in 2009 compared to the market benchmark.
- To reduce cost and improve performance, pension funds have to increase in-house management. According to research, “A 10% increases in internal management was associated 3.2bps higher net value added.”
- To diversify portfolio risk, recently many funds have increased their weightings in alternative investments such as real estate and private equity.

FUTURE STUDIES

- More studies can be done on how pension funds conducted in-house management compared differently to external management.
- How and what kind of alternative assets influence investment performance can also be researched.

REFERENCES

- Annual Reports of ABP, ATP, AP, CalPERS, CPPIB, GPIF, GPF, NPS from 2004 to 2013