The world’s corporate giants are poised to tap into record cash reserves and possibly embark on a long-awaited spending spree, fuelling hopes of a massive boost to the global economic recovery.

Companies, together with private equity firms, are coming under mounting pressure to delve into a global cash mountain of $7 trillion (£4.1 trillion) that has been amassed since the dark days of the financial crisis.

As the economic recovery gets under way and factories begin to operate at full capacity, investors are growing increasingly frustrated at more than half a decade of prudence, pushing chief executives to loosen the purse strings, experts believe.

“Capital spending could increase as early indicators show that industrial companies are beginning to run at higher levels of capacity than has been the case over the last five years,” Dennis Jose, senior global and European equity strategist at Barclays, said. “When factories and the like are running at less capacity on the back of lower demand there is very low capital expenditure.”

In the aftermath of the financial crisis companies hunkered down and re-engineered their balance sheets, diverting funds from investment to pay off debt or stockpile cash. However, even since the recession ended and the economy has picked up, many have continued to hoard cash leading to growing calls from investors to deploy cash reserves, which earns low returns sitting on balance sheets. Governments too are calling for a loosening of the purse strings to help propel the economic recovery, which is showing signs of stalling in many parts of Europe.

The bulk of the cash is held by 5,100 of the world’s biggest companies, which had combined reserves – cash and short-term debt – of $5.7 tn as of the end of 2013. The cash pile total excludes financial companies such as banks and insurers, who are required by regulators to hire capital.

Corporate America dominates the pack with about $2tn at its disposal, led by a clutch of tech titans. Apple’s cash mountain of $140bn means it has more unspent capital than any other American company, followed by Microsoft with $83bn, and Google, which has built up $59bn of reserves.

The FTSE 100 has $85.5bn of untapped cash reserves. Drugmaker AstraZeneca leads the pack with $8bn, closely followed by miners Anglo American with $7.7bn and BHP Billiton at $5.6bn.

The pile of unspent corporate cash that has built up since the start of the financial crisis is being held by an increasingly concentrated pool of companies. However, those companies are now expected by their investors to put the money to work, which is crucial to there being a pick-up in business investment in order to stimulate the world economy.

“If a company has cash on its balance sheet, it has three options; mergers and acquisitions, invest in its business to pursue organic growth, or return it to shareholders,” said Laurence Hollingworth, head of corporate coverage EMEA at JPMorgan.

Investor appetite for companies to spend their cash is highlighted by a record number of investors calling for companies to invest more in capital spending in a well-respected poll of fund managers by Bank of America Merrill Lynch. By comparison, the number of investors wanting companies to return surplus cash to them, via dividends and buybacks, is at the lowest level in five years.

With confidence returning to the economy, the pace of deal making has increased and cross-border M&A is already totalling $883.6bn this year, 127pc higher than the same period last year. A greater appetite for risk has also fuelled investment for buyout groups, who have spent the past year raising money to pursue new investment opportunities.

“Investors in private equity firms, which include pension and sovereign wealth funds, now have a greater risk appetite and are looking for returns in an environment with relatively low interest rates”, said Richard Parsons, head of private equity coverage at Deloitte. “They see the private equity market as being able to provide this.”

The private equity industry is now sitting on $1.2tn of so-called dry powder – the highest ever amount for the industry. As a result, industry experts believe the wall of cash and the ongoing recovery in debt markets could mean that private equity could start to write multi-billion cheques for deals.