The great hoard of cash purported to be mouldering in corporate vaults is attracting renewed scrutiny. Everyone has their own take on how this “dead money” could best be used. Politicians are keen for it to plump government coffers. Economists desire its deployment into productivity-boosting capital investments. Investors are chomping at the bit for bigger dividends. Social activists see it as an opportunity to reverse widening inequality. These may all be worthy goals, but some disappointment is likely.

In this report, we gauge the size of the cash hoard; the extent to which it has grown during the financial crisis; the rationale behind its existence; whether firms will be persuaded to relinquish some of it; and what its deployment would mean for the economy.

Undeniably, businesses around the world hold trillions of dollars in cash. U.S. holdings are nearing US$1.5 trillion (Exhibit 1); Canadian holdings are almost C$600 billion (see Appendix A for a discussion on Canada). However, surprisingly little of the cash has accumulated since the financial crisis, and it is far from clear that firms are holding greatly more cash than they should. In fact, a raft of structural and cyclical factors continue to argue for maintaining a sizeable cash reserve, though a limited amount may trickle out.

We anticipate a modest boost of 0.2% to 0.5% to the level of GDP, sustained over the next two years. In the current environment, we’ll take it.

DECONSTRUCTING THE GREAT CASH HOARD

Over several decades, American corporations¹ have managed to amass a mighty cash² reserve of $1.47 trillion. This is equivalent

¹ Banks are excluded due to the very different way they operate and how their balance sheets are constructed. Non-corporations such as partnerships and sole-proprietorships (and thus most very small businesses) are also excluded. This is unavoidable given how statistical agencies construct this information. In all likelihood, little fidelity is lost – larger firms probably hold the vast majority of the cash.

² When we refer to “cash” in this report, it should be thought of as “cash equivalents”, including currency and chequable deposits, foreign deposits, time and savings deposits, money market fund shares, security RPs and commercial paper.
to 9.3% of the U.S. economy – an undeniably eye-popping sum. The figure is even larger if foreign holdings are included (Textbox 1).

However, most of this money sat on corporate balance sheets long before the financial crisis struck, and so cannot fairly be regarded as cash that is opportunistically waiting for a break in the clouds to be deployed. Most is probably grounded for the long haul.

Recently accumulated cash would seem to stand a better chance of near-term deployment. Promisingly, corporate saving has been quite high since the global financial crisis struck in late 2008 (Exhibit 2). However, firms have quite a lot of flexibility over where this money goes (Exhibit 3), and most flowed into foreign acquisitions and trade receivables. Just a tenth of all accumulated financial assets over the period – $255 billion – wound up as cash (Exhibit 4). All the same, this is hardly a trivial sum.

**Post-crisis rationale**

Why have firms hung onto this cash? We start with the post-crisis rationale.

1. **Moving target**

A billionaire keeps more cash on hand than a millionaire, and a large business keeps more than a small business. The U.S. economy has grown by 12% since the start of 2009, and corporate balance sheets and cash holdings should be proportionately larger, too. Adjusting for this, the amount of truly “excess” cash accumulated over that period shrinks from $255 billion to $79 billion.

2. **Profits snap back**

From an accounting standpoint, a significant part of the cash accumulation occurred because corporate profits rebounded much more quickly than expected, and out of proportion to the economy as a whole. Corporate profits have boomed to 9.6% of GDP from a long-term average of 6.3% (Exhibit 5).

3. **Business investment rebounds less forcefully**

On the spending side of the ledger, business investment also rebounded after the financial crisis, but with notably less force than profits.

Did businesses consciously increase their cash holdings by restraining their investments? Yes and no. “Yes” in that business investment is running at an unusually low share of GDP. But
“no” in that inflation-adjusted business investment is running at a near-normal level (Exhibit 6).

These two seemingly contradictory observations are reconciled by the fact that the cost of investing in equipment and software has fallen over the past two decades. This is the best of all worlds: firms are not skimping on investments, yet saving a greater fraction of profits.

4. Oversupply of capital stock

Having identified the basic mechanism for the surge in corporate saving, we now turn to the rationale behind it.

A key justification for restrained capital investment is that the U.S. economy is already adequately endowed with capital. Existing plants and equipment are running at just 78% of capacity, less than the usual 81% to 83% (Exhibit 7). The U.S. capital-to-GDP ratio also looks normal, providing little evidence that firms have underinvested (Exhibit 8).

And despite the current hesitation to invest in factories, office buildings and other physical capital, the investments being made are still substantially outpacing the rate at which existing capital depreciates (Exhibit 9).

5. Return on capital

When firms are deciding whether to invest more, one consideration is the relative cost of capital versus the return on capital.

We calculate that the cost of capital is slightly high relative to the norm over the past decade (Exhibit 10).

Determining the future return on capital is more complicated, requiring an evaluation of several vying methodologies. As an encouraging starting point, the historical return on capital and return on equity have both been attractive of late (Exhibit 11). But firms cannot simply build twice as many factories and assume their profits will double. With capacity utilization running below normal, the next dollar of investment will probably earn somewhat less.

Next, we employ a measure called Tobin’s Q, which evaluates whether investors would reward corporations for having a larger capital stock. It provides a roughly neutral reading (Exhibit 12).

Lastly, we obtain a more forward-looking (if simplistic) approximation for the future return on capital by estimating the

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3 Particular thanks for cheaper capital costs go to emerging markets like China and significant advances in automation.
Note: Use of different scales to align historical averages.
Source: BEA, Haver Analytics, RBC GAM

Note: Cost of capital calculated as weighted average of cost of equity and cost of debt. Source: Haver Analytics, RBC GAM

Exhibit 6: Business Investment Is Below Norm

Source: Federal Reserve Board, Haver Analytics, RBC GAM

Exhibit 7: U.S. Capacity Utilization Below Normal

Source: Federal Reserve Board, Haver Analytics, RBC GAM

Exhibit 8: U.S. Economy Has Adequate Capital Stock

Note: Capital recorded at cost, not market value. Historical average from 1980.
Source: BEA, FRB, Haver Analytics, RBC GAM

Exhibit 9: Capital Stock Ascending Again

Note: Y-axis in logarithmic scale.
Source: Federal Reserve Board, Haver Analytics, RBC GAM

Exhibit 10: U.S. Cost of Capital Slightly High Relative to Recent History

Note: Cost of capital of U.S. non-financial corporations calculated as weighted average of cost of equity and cost of debt. Source: Haver Analytics, RBC GAM

Exhibit 11: Handsome Returns Available for Expanding Firms

Note: Use of different scales to align historical averages.
Source: BEA, Haver Analytics, RBC GAM
future rate of nominal GDP growth. This looks to improve, but to remain slightly subpar. The combination of these four metrics provides a rather mixed but on the whole cautiously positive verdict.

The pairing of a slightly high cost of capital and a slightly high return on capital effectively neutralizes one another. In this context, it is understandable that businesses did not race forward with additional investment plans (though the degree of caution deployed was arguably outsized).

6. Deleveraging
Contributing to this business recalcitrance was an overwhelming urge to deleverage. This was an understandable pursuit after a financial crisis, as firms better comprehended the dangerous world in which they lived, found that their assets were worth less than they imagined and discovered that continuous access to debt markets was not guaranteed.

Instead of focusing purely on growth and profitability, firms sought (and seek) to ensure their “survivability” as well. Unavoidably, the channelling of resources to the financial account necessitated a diversion away from capital investments (Exhibit 13). Accordingly, asset liquidity now commands a place of prominence (Exhibit 14), and corporate debt-to-income (Exhibit 15) and debt-to-net worth ratios (Exhibit 16) are again looking normal.

7. Policy uncertainty
Policy uncertainty is the most oft-cited reason for U.S. corporations restraining their capital investments. Quite rightly, firms point to uncertainty regarding economic growth, the fiscal cliff, the debt ceiling, the pursuit of a sustainable long-term fiscal trajectory, health-care reform and financial-sector reform. One (highly imperfect) proxy for these worries is the policy uncertainty index, which is currently elevated (Exhibit 17).

8. Pension deficit
Yawning corporate pension deficits may go mostly neglected in the official national accounts figures, but they are not forgotten by the corporations themselves. We estimate that private U.S. defined-benefit pension plans were underfunded by $909 billion as of 2011. In comparison, they were roughly balanced in 2007. Firms may be building up their financial assets as a precaution.\(^4\)

\(^4\)Providing tentative confirmation of this notion, corporate pension funds enjoyed growing surpluses in the late 1990s, and corporations responded by dissaving on their balance sheets at that time.
9. Opportunistic borrowing

We observe that financial liabilities have increased at U.S. corporations. Some of these firms may be borrowing to take advantage of low interest rates, with the intention of deploying the capital later when economic conditions are more favourable (and borrowing costs have increased). In the meantime, unused financial assets twiddle their thumbs on balance sheets.

Structural rationale

Remarkably, corporate cash holdings have grown almost twice as quickly as the economy over the past two decades. This strongly suggests that there must be structural factors contributing to cash-holding decisions as well, in addition to the nine cyclical factors just discussed.

We begin by acknowledging a certain amount of overlap between the cyclical and structural factors. Most obviously, the corporate profit surge is not a recent phenomenon. The trend began in earnest in the late 1990s. Corporate leaders remain fearful that this boom in earnings could end as abruptly as it began, and so have been reluctant to spend the windfall profits.

Similarly, the price of capital goods has been receding for longer than just the past few years, so the basic construct of profits rising faster than investment has been a central theme for quite some time.

More generally, a certain level of cash is always needed, if only to make payroll or to provide a buffer against economic surprises. Households are often advised to have no less than three months of liquid savings stowed away as a precaution against emergency or job loss. Despite steady growth in their cash holdings, we calculate that American firms can still barely cover one month of expenses.

Contributing to rising cash holdings, corporate competition is arguably becoming fiercer in many sectors. Firms need the financial flexibility to develop “game-changing” products, pivot quickly into new businesses, acquire patent portfolios and credibly discourage others from penetrating their markets. Moreover, as intellectual property grows in importance, firms are obliged to pair these intangible and rapidly depreciating assets with increased cash holdings as a way of stabilizing their balance sheets.

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5 A weak economy would require a cash buffer due to diminished profits; a strong economy would demand the deployment of cash into additional plants and equipment to maintain market share.
Future deployment of the cash hoard

To summarize, there are many reasons why firms have opted to hold an unusually large amount of liquid assets. Some of these are structural reasons, some are cyclical.

Most of the structural reasons for the cash hoard will endure. The cost of capital goods should remain low, permitting firms to save on capital investments. Competition will only become fiercer, and intellectual property will continue to play a central role in corporate operations, necessitating larger cash holdings. A chunk of corporate cash will remain with foreign subsidiaries, and sporadic tax amnesties will only temporarily diminish this effect, at least until significant U.S. tax reform is undertaken. An expanding economy demands larger cash holdings.

Constraints to lift

Despite all of this, several constraints may begin to lift in 2013, and we think this may be enough to unlock at least some of the cash in corporate coffers.

First, and most provocatively, we wonder whether business leaders may become increasingly comfortable with the notion that corporate profits can remain sustainably higher than the historical norm. We analyze this possibility in Appendix B, and conclude that profits should remain well above the historical average, even if they are unlikely to persist indefinitely at current elevated levels. This conclusion should make firms willing to invest more of their profits.

Second, the direct rationale for holding more cash may be fading. The urge to deleverage is ebbing as the economy normalizes and corporate balance sheets look increasingly healthy. Defined-benefit pension plans may become marginally less underfunded as financial markets and discount rates rise.

Third, the corporate sector does not exist in a vacuum. Government borrowing in recent years crowded out some corporate financing, obliging firms to hold more liquid assets as a precautionary move. As the U.S. government begins to tame its deficits, corporations may be able to invest more.

Fourth, the rate of cash accumulation has already slowed. Some of this may just be related to a surge of special one-time dividends before dividend tax rates rise in 2013, but some may represent something more genuine.

Alltogether, it is not unreasonable to expect a fraction of the U.S. cash hoard to be directed to a mix of business investment and dividends, tilted toward the former.  

Business investment

There is a smattering of evidence that capital spending sometimes takes a few years to catch up to corporate profits. The two could yet converge from below.

In addition, a degree of policy uncertainty should fall away in 2013, permitting a logjam of cash to be released. Similarly, capacity-utilization rates are edging higher, and nearing a level at which additional factories, warehouses and other
capital stock will be needed. Moreover, firms have seized the opportunity to borrow at low rates, suggesting no shortage of future investment intentions.

These are all signals of a potential increase in business investment.

**Dividends**

There is also an argument for higher dividend payments. The S&P 500 dividend yield is already on an upward trajectory, having doubled to 2.3% since 2000 (Exhibit 18).

Given the challenge of low interest rates and the decline in risk appetite that accompanies an aging population, investors crave still more dividends. Unfortunately, these are unlikely to revert to earlier high-flying eras when yields flitted between 3.5% and 6%. Those levels were only achievable in an era of very low equity valuations. U.S. firms are already allocating a nearly normal share of profits to dividend payments (Exhibit 19).

Still, it is likely that dividend yields (and/or equity buybacks) will rise slightly, if gingerly. Firms have an incentive to move slowly on dividends given how brutally markets punish reversals.

The one exception to this slow-go approach has been special dividends, which have surged in the latter half of 2012. Since August, more than 160 firms have issued $33 billion of special dividends on top of the usual annual flow of around $450 billion. We expect this trend will end shortly given the prospect of higher dividend-tax rates in 2013.

**Bottom line**

In conclusion, the “great cash hoard” is every bit as great as imagined, but is unlikely to vanish any time soon. The vast majority serves a variety of cyclical and structural masters.

Still, with more than a trillion dollars involved, there must be the potential for some economic gain, however limited. Calculating this isn’t quite as simple as mapping $1 of freed cash onto $1 of economic growth.

As a starting point, there is evidence that when corporations spend more cash, households spend less. This diminishes the net economic benefit of deployed corporate cash by about half. Second, not all forms of cash deployment are created equal. Deployment into business investment may yield a superior economic benefit due to the productivity-enhancing side effects, while deployment into dividends could yield an economic benefit of less than one since households only spend a fraction of the money. Combined, we figure every dollar of disbursed corporate cash is worth an average of just 63 cents to the economy.

A plausible (though slightly optimistic) scenario would be for firms to release the entirety of the cash they have accumulated since the start of 2009. Deploying this $255 billion would cumulatively add about 1% to U.S. GDP.

Another plausible (though slightly pessimistic) scenario would be for firms to merely revert to their pre-crisis cash-to-GDP ratio, meaning the deployment of just $79 billion, generating a cumulative 0.3% boost to GDP.

These two scenarios do not constitute the absolute upper or lower bounds, but they do represent the central tendency for corporate cash deployment. For the next two years, this should sustain a 0.2% to 0.5% increase in the level of GDP. This aligns well with our sense that the U.S. economy is on the cusp of growing a little more briskly.

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7 1945 to 1955, and then again from the early 1970s to the mid-1980s.

8 Part of this is a crowding-out effect, but most relates to the fact that individuals are ultimately the owners of corporations. The corporate cash is really their cash, whether physically in their hands or not. Research finds that when the corporate sector spends an extra dollar, the household sector tends to save an extra fifty cents in response.

9 The remainder of the dividend payment is recycled back into the financial market, and could in turn be deployed as business investment, stored as cash or distributed back out to households all over again.
APPENDIX A: CANADA

Just like the U.S., Canada has also accumulated a large cash hoard. However, the details are quite different.

Canada has a vastly larger cash hoard (on relative basis) than the U.S., worth a giant 32% of GDP, versus just 9% for the U.S. (Exhibit A). In dollar terms, the Canadian corporate cash holdings sum to C$587 billion (of which C$373 billion is domestically held).

However, there are several reasons why Canada’s cash holdings may prove stickier than a jug of maple syrup.

First, little of corporate Canada’s cash hoard has accumulated since the financial crisis struck (Exhibit B). Although absolute cash holdings have increased by C$56 billion, virtually all of this is held abroad. Domestic cash holdings have increased by a scant C$1 billion. Moreover, adjusting for the fact that the Canadian economy has grown, there is relatively less cash than before.

Second, small open economies like Canada are more exposed to swinging currency markets and the vagaries of foreign demand, oblige higher precautionary cash holdings.

Third, Canada’s cash hoard has a different sectoral orientation than the U.S. To be sure, Canada’s handful of tech giants also have large cash holdings, just like the U.S. But mainly, it is Canada’s thundering herd of resource firms that have the greatest cash holdings. This is consistent with other resource-rich countries like Australia, Norway and the U.K., all of which also have quite high corporate cash levels that predate the financial crisis (Exhibit C).

Resource firms hold significant cash reserves for good reason. These are businesses exposed to highly variable revenues over which they have no control, combined with highly lumpy expenses.

Revenues are set on global energy and commodity markets, which exhibit enormous volatility as commodity prices swing. Firms may fear that the commodity supercycle will not last.

On the expenditure side, the nature of the resource business is to undertake infrequent but massively capital- and labour-intensive projects in an effort to open up new resource plays. This requires large sums of cash, much of which sit apparently idle on balance sheets until the moment when they are suddenly deployed. Cost inflation is problematic and cost overruns are frequent. Because of the speculative nature of the undertaking, firms cannot easily rely on external financing to fund these ventures. Resource firms that fail to carry a sufficiently large cash buffer are disciplined by the market, if they don’t fail (or get bought) first.

In short, Canada’s cash hoard is larger than that of the U.S., but longer-lived and therefore possibly less likely to be deployed. Moreover, some of the cyclical drags that are set to unlock a fraction of U.S. corporate cash in 2013 are less relevant to Canadian firms.
APPENDIX B: RISING PROFIT SHARE

U.S. corporate profits have risen out of line with GDP for more than a decade. Firms are understandably fearful that this trend could someday reverse. Unquestionably, this would constitute a very bad scenario, as a complete mean-reversion would drive the level of corporate profits all the way from $1.5 trillion to just $964 billion. Mapping this onto the S&P 500, the price/earnings ratio would soar from a pleasant 14 to a seriously worrisome 23.

Consequently, it is enormously important to determine the likelihood of corporate profit mean-reversion.

Testing for mean-reversion

Our hunch is that the corporate profit share of GDP cannot soar indefinitely, and that it is unlikely to ascend much further than current levels in the near term. But by the same token, statistical tests suggest it is no longer clearly a mean-reverting entity – it could yet continue to defy gravity.

There may even be good reason for this unexpected finding. Developments with regard to profit margins, foreign operations, technology, tax and interest rates are all contributing to this dislocation.

Profit margins

Corporate profits are lofty, in large part because profit margins are themselves elevated (Exhibit D). Higher profit margins have been made possible by a recent disconnect between labour costs and pricing power (Exhibit E).

Labour costs are low due to elevated unemployment, globalization and declining unionization. The unemployment rate should eventually fall, but normality is still several years away. The other two factors are likely to be somewhat more stubborn in their dampening effect.

Meanwhile, firms continue to enjoy satisfactory pricing power for their own products, and much of this should persist due to imperfect competition and barriers to entry in many segments of the economy.

Foreign operations

One reason the U.S. corporate sector can afford to – permanently – rise as a share of GDP is that a growing fraction of corporate operations and profits are generated from abroad (Exhibit F). The global economy has grown more than twice as quickly as the U.S. economy over the past decade and furthermore U.S. firms have not yet saturated foreign markets.

Note that the water is muddied somewhat by the fact that corporate profits as defined in the national accounts only include foreign profits repatriated back to the U.S., while a significant minority of such profits are retained abroad.
**Technology**

Most gains from capital intensification and research naturally accrue to corporations since it is they who have predominantly funded it. This in turn enables the funding of yet more capital intensification and research. By contrast, labour quality is rising more slowly, resulting in a shrinking share of GDP that naturally accrues to workers. This may be tilting the balance away from labour and towards the owners of capital.

**Lower taxes and interest rates**

Across the world, corporate tax rates have come down over time (Exhibit G). European corporate tax rates are down 35% from the mid-1980s, and the top U.S. rate is down 24% over the same period. Canada’s corporate tax rate has come down 31% since 2000. Even though the U.S. rate has held steady for several years, the fraction of profits paid out in taxes has continued to decline.11

The decline in interest rates has also saved firms a great deal of money. When compared to the average borrowing cost since 1990, low interest rates are saving U.S. non-financial corporations more than $200 billion per year. These developments have enabled after-tax corporate profits to capture a greater share of GDP. Some part of this process may unwind in the coming years, but not all.

**Miscellaneous**

Finally, the growth in the corporate profit share of GDP could in part be a compositional effect as corporations outgrow other types of establishments such as partnerships, sole-proprietorships and non-profits. There is little doubt that the corporation has proved the dominant business entity.

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11 This last development may be a function of corporations continuing to deduct earlier losses from current income, or additional use of deductions.
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