Locked Liquidity in Industry

A research study into the amounts of capital trapped in outright equipment purchase in the manufacturing sector

SFS Research Study, February 2014

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Management summary

- As tightened international banking regulation looks set to restrict some companies' long-term access to loans, industrial businesses are seeking ways to unlock liquidity in their operations and supply chains in order to maximize their available working capital.

- Working capital needs to be optimized for use in short-term initiatives to seize market opportunities, such as new product development, acquisitions or sales and marketing campaigns.

- Billions of euros, however, remain locked in outright purchase of plant and equipment in the industrial sector, unavailable for short-term working capital requirements which support company growth and competitive positioning.

- In ten countries studied across the globe, levels of Locked Liquidity in industry were modeled over the next five years. The study identified the following levels of Locked Liquidity in manufacturing industry between 2014 and 2018, both as financial volumes and as a proportion of Gross Domestic Product (GDP):

  - China €1,371.6 billion [2.00% of GDP]
  - India €166.8 billion [0.70% of GDP]
  - USA €137.1 billion [0.21% of GDP]
  - Germany €58.8 billion [0.44% of GDP]
  - Russia €42.2 billion [0.37% of GDP]
  - France €27.9 billion [0.30% of GDP]
  - Turkey €27.8 billion [0.53% of GDP]
  - Spain €18.7 billion [0.33% of GDP]
  - Poland €16.6 billion [0.47% of GDP]
  - UK €12.2 billion [0.12% of GDP]

- China and Turkey stand out as having very high levels of Locked Liquidity in their manufacturing industries, as a percentage of GDP. These countries have been experiencing rapid growth in their industrial infrastructure over the last five years, requiring large volumes of capital expenditure. Although asset finance is growing strongly in these countries, take-up and awareness is less widespread compared to mature leasing and asset finance economies.

- India also shows high levels of Locked Liquidity. However, the leasing market remains small because of complex taxation structures. Nevertheless, asset finance is growing in India in the
form of hypothecated loans, secured against the asset, in contrast to traditional relationship lending.

- In the more mature markets studied (USA, UK, Germany, France, Spain and Poland), Locked Liquidity rates as a percentage of GDP are lower, implying that these countries are making greater use of asset financing techniques to acquire new or upgrade technology and industrial machinery, in preference to tying up their own capital or loan commitments in depreciating equipment.

- Differences in Locked Liquidity rates in these mature economies mainly vary according to the relative size of their manufacturing sectors as a proportion of the economy as a whole.

- In Russia, leasing has grown strongly since 2008, and this dynamic leasing market (the fourth largest in Europe) is making strong use of asset finance for acquiring industrial machinery and technology.

- Asset finance generally, and in particular leasing and renting, is widely recognized as an effective method of liberating liquidity currently locked in outright equipment and machinery purchase.

- It is the contention of this report that wider use of asset finance in industry could unlock levels of liquidity that represent, on average, around 7% of annual profits. For smaller manufacturing companies, many of whom are experiencing restricted access to standard loans from traditional relationship funders, asset finance provides an alternative method of financing to acquire the up-to-date machinery and technology that helps them compete in increasingly globalized markets, whether by achieving additional efficiencies or gaining competitive advantage.

- Asset finance is also playing an increasingly important role in enabling conversion to more energy-efficient industrial equipment, since it helps align regular, affordable monthly payments with the incremental savings gained from lower energy consumption, often using the energy cost saving to subsidize, or wholly pay for, the investment.
Industrial growth around the globe

On a global level, new order trends in industry, as well as basic material demands, are positive. In the world’s largest economy – the US – the official index of industrial production is now only a fraction off returning to its 2007 levels.¹ In Western Europe, Germany retains its leading position for industrial growth, having led the region’s fortunes in the last few years.² The UK’s manufacturing sector is showing signs of health, reporting its largest quarterly production rise since 2010.³ In France, the index of industrial production has been oscillating up and down in recent years, but is still five index points above its nadir in the spring of 2009.⁴ Poland has also seen a slowdown to marginal rates of change in industrial output, compared with growth rates of more than 5% experienced in 2011 and 2012.⁵ Spain shows the gloomiest picture in the European countries covered in this study, but even here, industrial production statistics have started to show positive for four of the five months to the end of last year.⁶

Turning to faster growth economies, official reports in China are saying that “stabilized demand from the three main drivers of China’s economic growth… means industrial output expansion should remain at a relatively high pace.”⁷ In India, industrial output growth has shown a steady upward trend, albeit with occasional slower months in the last year.⁸ Russia, which moved into the world’s top five economies in the last summer,⁹ and where industrial growth has been steadily high since the late 1990s, but also where economic growth forecasts have recently been scaled back,¹⁰ has settled to marginal rates of industrial expansion.¹¹ Finally, Turkish manufacturing continues to report higher output levels and new order growth, as well as increases in payroll numbers.¹²

¹ Federal Reserve Board, Industrial Production (G17)
² Markit, Industrial production growth adds to signs of third quarter economic expansion, 9 October 2013
³ Markit Economics, UK Industry see largest quarterly production since 2010, 9 October 2013
⁴ INSEE, Industrial Production Index
⁵ Focus Economics, Industrial production growth slows in August, 18 September 2013
⁶ Trading Economics, Spain, Industrial production; Markit Spain Industrial PMI, 2 Jan 2014
⁷ China Daily, China industrial output growth to remain high, 19 October 2013
⁸ Reuters India, August industrial output growth slows to 0.6%, 11 October 2013
⁹ World Bank, GDP by Economy (PPP), 2012
¹⁰ World Bank, Russia, Overview
¹¹ HSBC Russia manufacturing PMI
¹² HSBC Turkey manufacturing PMI
Acquiring industrial technology and access to finance

In order to maintain sustainable growth, whether in recovering mature economies or in higher growth economies, industrial companies need to refresh, renew and extend their equipment, plant and technology. In particular, technological advances in machinery and equipment can help to introduce greater levels of productivity, reducing the cost per unit produced and improving competitive capabilities, as well as also reducing energy consumption in the face of rising global energy prices.\(^\text{13}\)

Such technology and machinery acquisitions and upgrades require access to affordable capital. However, in an atmosphere of tighter banking regulations after the financial markets crisis of 2008, commentators have predicted that standard bank relationship credit will remain less available to business for the foreseeable future\(^\text{14}\) – a long-term ‘credit squeeze’. The pre-financial-crisis supply of reasonably priced credit for all has given way to much tighter ‘rate for risk’ lending criteria in the US and Europe.\(^\text{15}\) Small business lending in the US at the last major reporting point was some 83% of 2008 levels.\(^\text{16}\) In the UK, traditional bank lending is in its fifth year of decline.\(^\text{17}\) In France, new bank lending to small and medium-sized enterprises (SMEs) has declined by 37% and even up to 66% in Spain since the pre-crisis peaks.\(^\text{18}\) Western bank deleveraging in Central and Eastern Europe has reduced credit availability.\(^\text{19}\) And all this has particularly affected SMEs that are so critical to many industrial supply chains.

Even in China, concerns about the growing gulf between the credit cycle and the business cycle,\(^\text{20}\) along with soaring growth in credit as a percentage of GDP (credit-to-GDP ratio rose to 187% in 2012 from 105% in 2000),\(^\text{21}\) have caused concern, to the extent that during the mid-2013 dip in manufacturing output, some (possibly overstated) commentators even talked about a possible ‘credit crunch’.\(^\text{22}\) At all events, it is widely attested that Chinese smaller businesses have difficulty accessing

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13 See, for instance, Siemens Financial Services, Making the (Up)grade, October 2013
14 See, for instance, A. Angelkort, A. Stuwe, Basel III and SME financing, 2011
15 See, for instance, Federal Reserve Bank of Cleveland, Small business – still squeezed, 14 August 2013
16 U.S Small Business Administration, Small business lending in the United States 2012, July 2013
17 Financial Times, Non-bank lending to small businesses at highest level since 2008, 21 October 2013
18 Institute of International Finance and Bain & Company, Restoring financing and growth to Europe’s SMEs, October 2013
19 Raiffeisen Research, CEE banking sector report, May 2013
20 The Economist, Chinese credit – Look both ways, 2 July 2013
21 Bloomberg, China’s debt surge pressures Xi-Li to avert lost decade, 6 August 2013
22 FX Street, Asian stocks fall as fears of credit crunch in China rise, 25 June 2013
credit and pay high prices. A similar picture emerges across the rapid growth economies studied in this report; according to the World Bank’s rankings for ‘ease of getting credit’, India comes 40th, China 67th, Turkey 78th and Russia 120th. In a nutshell, access to standard bank lending – especially for the myriad players in industrial supply chains – is under pressure across the globe. Of course, Turkey also recently raised base rates in order to stem capital flight from the country, and this will have made traditional commercial lending expensive for manufacturing industry.

Unlocking sources of liquidity

Where, then, are businesses to look for working capital and investment funding, now that relationship credit is under pressure, possibly for the long term? There are currently three main techniques to which financial directors are turning to release liquidity in their businesses. One is acquiring essential equipment and upgrades using asset finance in order to conserve capital and unlock liquidity. The second is financing their outstanding invoices to improve cash flow. And the third is financing inventory, again to ensure precious capital is preserved and liquidity released. This paper focuses on the first of these techniques – the liquidity contribution made by acquiring industrial equipment through asset finance.

The role of asset finance techniques such as leasing and renting to unlock liquidity and preserve capital is widely acknowledged. One international bank noted that “The most significant advantage of leasing lies in the fact that it preserves and safeguards liquidity”. The benefits of asset finance and leasing are variously characterized: by a technology analyst as “a superlative solution to unlock capital”; by an international bank as “an important tool to unlock working capital”; by another technology analyst as an “important option to preserve capital”. The manufacturing press itself recognizes these benefits, with one publication noting that “this approach has unlocked capital for countless smaller manufacturers who were turned down for a

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25 Credit Suisse, Swiss leasing Market, February 2013
26 Global Industry Analysts, Medical equipment leasing and renting, April 2013
27 Royal Bank of Scotland, Asset finance – an important tool to unlock working capital
28 IDC in Wall Street Journal, Companies opt to lease and finance equipment to preserve capital, 30 July 2012
bank loan”. Another key publication noted that “a lease can provide significant benefit in the preservation of working capital and cash flow management”.

The restrictive effect of Locked Liquidity

This report has defined capital tied up in the outright purchase of equipment as ‘Locked Liquidity’. If a company’s working capital is tied up or ‘locked’ in deprecating machinery, equipment or other technology, it is not available for a host of other activities. These might include: acquiring an ailing competitor; new product development; sales and marketing initiatives; funding sudden spikes in inventory to support increased production and many more. The ability to fund and activate such initiatives is particularly important in manufacturing at the moment, whether to take competitive advantage of renewed economic growth, or to ride the wave of opportunity in faster-growing economies.

The restrictive effect of Locked Liquidity on business expansion and on competitive positioning remains much the same, regardless of whether a company is using its own working capital from retained profits, or borrowing from the bank. A business generally does not want to commit its own capital, and would rather reserve it for nimble, tactical initiatives. By the same token, neither does a company want to unnecessarily use up its lines of bank credit (possibly subject to stricter limits than hitherto because of tightened bank regulation) which could be kept available for competitive initiatives. This is true for companies large and small. Locking away liquidity in this way must be viewed as a serious opportunity cost.

The role of asset finance

A good number of players in the industrial community have recognized the suppressant effect of Locked Liquidity and are already acquiring a proportion of their plant and equipment using asset finance. For instance the current demand for asset finance amongst machining companies across the world was illustrated in a recent report from Siemens Financial Services (SFS), conducted amongst the global top 80 machine tools vendors. The report revealed that 84% of respondents’ customers were experiencing difficulty in accessing finance to fund equipment acquisition.

29 Canadian Manufacturing, Tips for buying and leasing, 18 July 2013
30 Food Manufacturing, Lease vs. buy, 13 September 2013
31 Siemens Financial Services, Making the (up)grade, November 2013
Moreover, 64% said asset finance has been "highly important" in enabling their customers to acquire equipment over the last two years.

Nevertheless, in the industrial sector, the range of machinery and equipment acquired through asset-finance techniques could (and should) be much wider, in order to unlock considerably more liquidity in industrial supply chains. For instance, many industries use a variety of ‘pick and place’ technologies, particularly hi-tech manufacturing sectors. Then there are various other asset types, spanning various forms of vehicle and movable plant, IT and control systems, security systems, printing equipment, and many other categories.

Industrial organizations may want to commit capital to *appreciating* assets – property being the typical example. However, it makes little sense to commit capital to *depreciating* assets (machinery, equipment, technology, vehicles, etc) and lock liquidity out of being available for tactical initiatives. By spreading capital expenditure over a pre-agreed financing period agreed in a lease or rental arrangement, the need for a large initial outlay is reduced, thereby increasing the funds available for operating expenditure. In other words, asset finance allows companies access to the latest technologies, without having to commit scarce capital or use traditional lines of credit.

Moreover, no nimble industrial company wants to find themselves owning previous generation equipment (which they have decided to write down, for example, over ten years) when a more productive, or more energy-efficient alternative becomes available. In this situation, companies that have signed up for a lease agreement, which typically will include an upgrade capability, will have an advantage in the market. Other requirements such as

Calculating Locked Liquidity

This report used the following model to calculate Locked Liquidity in industry:-

- Projections for capital equipment spending by industrial companies were researched for the next five years, 2014-2018 inclusive.
- These sums were then reduced to the proportion of industrial equipment spending for which leasing and asset finance is an appropriate financing technique (conservatively circa 20%).
- Based on leasing association data in each country, these sums were then further reduced by the volume of that capital equipment investment already financed through leasing.

The remaining sum is regarded as *Locked Liquidity* in that it has been locked-in to outright purchases where monthly finance payments could have been spread across the lifetime of the asset, in order to release much needed working capital.
installation, maintenance, service and training can also be covered in leasing solutions.

Banks on the whole tend to lend on a short term, variable basis and will often require additional security or impose credit caps when economic circumstances worsen. In comparison, asset finance arrangements tend to be fixed for the whole period of the agreement, guaranteeing usage of the technology so long as monthly payments are met. This helps to eliminate the volatility of shorter-term economics (interest rates, inflation and credit conditions) and market dynamics. Following several years of fluctuations in the price of credit, businesses are increasingly attracted by financing methods which secure an alternative, predictable level of monthly payments for the whole financing period.

Such flexible, tailored financing arrangements tend to be offered by technologist-industrial financiers; they understand technology development paths, and their application in, and contribution to the business concerned, and so can take expert decisions and craft tailored financing packages more easily than a generalist financier.

**Energy efficiency**

Asset finance solutions are also particularly valuable in facilitating energy efficiency investments, a topical investment area that is receiving growing attention from manufacturing industry. Since the industrial sector uses significant amounts of energy, it is best placed to reap the financial rewards of lower energy consumption. This can be illustrated through one example from the UK, where a study has revealed that the industrial sector is overspending by £2.22 billion (€2.63 billion, $3.56 billion) a year on energy. This substantial waste of money and resources is particularly concerning when viewed in the context of rising electricity prices. The manufacturing industry has seen the average price paid for electricity rise inexorably over the last decade – a phenomenon particularly damaging to the profit margins of energy-intensive industries such as chemicals, steel, cement, aluminium, glass, paper and ceramics.

The acquisition of environmental-friendly, energy-efficient equipment can be made more affordable through asset finance. Arrangements have now become available on
the market where finance payments are equal to, or lower than, the value of the energy savings and in many cases can deliver savings and net positive cash flow immediately after installation has been completed. Where a project cannot completely offset the equipment upgrade with energy-efficiency cost savings, the financing arrangement can nevertheless subsidize the larger part of the upgrade cost. In the manufacturing sector, this is often highly attractive as up-to-date equipment may not only lower energy costs, but also boost productivity and extend manufacturing capability, generating more revenue and margin.

**Levels of Locked Liquidity – Summary findings**

What, then, is the scale of Locked Liquidity in the ten countries studied in this research paper? This paper developed a highly conservative model for projecting levels of industrial Locked Liquidity across ten countries, over the next five years. The model takes into account both the volume of industrial investment already financed through leasing, as well as the proportion of industrial equipment for which lease finance would be appropriate and available.

The resulting figures represent the liquidity in industrial firms that could be unlocked, if current industrial equipment leasing volumes remain unchanged as a proportion of all industrial equipment investment.

![Locked Liquidity in Manufacturing Industry 2014-2018](image)
China, of course, stands out in the table simply because of the massive investment in its industrial infrastructure which is expected to continue to the end of the decade. Having said which, it is critical to the sustainable growth of the Chinese economy that the financing methods used to fund this investment are themselves sustainable. By aligning payments with the projected accrual of productivity/efficiency benefits, and by not restricting access to working capital (whether accumulated from profits or borrowed from the bank), asset finance and leasing tend to provide the optimal solution from a liquidity and sustainable growth viewpoint.

The possibility that illiquid technology and machinery investment in the rapidly expanding Chinese industrial infrastructure could become an issue is illustrated in the following table, which shows the proportionate size of Locked Liquidity relative to Gross Domestic Product (GDP). This is highest in China – a reflection of the extraordinary rate of industrial infrastructure development throughout the country.

<table>
<thead>
<tr>
<th>Country</th>
<th>Locked Liquidity as % of GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>2.00%</td>
</tr>
<tr>
<td>India</td>
<td>0.70%</td>
</tr>
<tr>
<td>Turkey</td>
<td>0.53%</td>
</tr>
<tr>
<td>Poland</td>
<td>0.47%</td>
</tr>
<tr>
<td>Germany</td>
<td>0.44%</td>
</tr>
<tr>
<td>Russia</td>
<td>0.37%</td>
</tr>
<tr>
<td>Spain</td>
<td>0.33%</td>
</tr>
<tr>
<td>France</td>
<td>0.30%</td>
</tr>
<tr>
<td>US</td>
<td>0.21%</td>
</tr>
<tr>
<td>UK</td>
<td>0.12%</td>
</tr>
</tbody>
</table>

The same could also be said of the economies where, at least up until 2013, the industrial infrastructure has seen sustained and rapid growth. In Turkey and India, Locked Liquidity is also disproportionate to the size of the economy compared with the mature industrial infrastructures in Europe and the United States, or indeed those going through wholesale updating as in Russia and Poland.

These findings would imply that in the US, Europe and Russia, greater use is being made of asset financing options to acquire up-to-date industrial equipment, whether for new installations or for technology upgrades, than in countries such as India, Turkey and China, where brand new industrial infrastructure is being created for the first time. This is likely to change as governments in each of these countries become concerned about their economies overheating – in particular as a result of over-leverage. Various commentators have pointed to the need for the debt:GDP ratio to be brought under better control for the economy’s development to
be sustainable in the long-term.\textsuperscript{32}

In India,\textsuperscript{33} following the major depreciation of the rupee in 2013, GDP has slowed, and manufacturing showed signs of contraction, all of which will have put pressure on industrial firms that have invested their own capital in equipment purchases. Interestingly, the Indian situation differs from other countries, in that the leasing market remains small because of taxation complications across state borders. Instead, Locked Liquidity is being released through the use of loan-based asset finance, hypothecated to the asset acquisition, and secured upon the asset. This type of loan-based asset finance therefore differs from traditional lines of relationship credit facilities provided by banks, which are not hypothecated and may not be secured against anything more than the company’s credit rating. Asset finance of this kind is increasingly being provided by specialist industrial and technologist financiers who have a deep understanding of technology applications in manufacturing industry and can use that understanding to mitigate risk more than a generalist financier. Such providers of asset finance are therefore able to offer flexible financing solutions that are tailored to fit the company’s particular requirements.

Perhaps the most illuminating insight, however, is when the figures are broken down into large manufacturers and SME industrial organizations. Larger companies have more options when raising finance because they can access the public financial markets. SMEs, on the other hand, are far more reliant on bank lending. As international banking regulations are tightened with the implementation of Basel III, it is likely that the allocation of funds to SME lending will drop as their risk weighting rises under the new rules, and therefore the level of regulatory capital that banks must set aside in relation to this part of their loan portfolio. Data on lending to SMEs from central banks in the US, the UK and Europe would imply that SME lending has already been falling.

\textsuperscript{32} Global Risk Insights, See, for instance:- For soft landing, China must tackle debt-to-GDP ratio in 2014, 14 Jan 2014; Reuters, China’s economic growth dodges 14-year low, but further slowing seen, 20 Jan 2014.
\textsuperscript{33} The Economist, A five star problem, 30 Aug 2013; The World Bank, Global economy at turning point, 14 Jan 2014
Finally, it is important to understand how economically significant these estimates of Locked Liquidity in manufacturing industry are. One preliminary way of judging this is to express Locked Liquidity as a proportion of all manufacturing turnover. A consistent dataset for manufacturing turnover is published by the OECD for six of the ten countries studied in this report (no data is published for China, India, Russia and the US). Analysis of this information reveals that Locked Liquidity levels represent, on average, around three quarters of a percent of turnover. How significant a sum is this? Various studies\(^{34}\) reveal that global net profit margins in manufacturing are around 10-11%, so three quarters of a percent of turnover will on average represent approximately 7% of profits. On this basis, the possibility of unlocking liquidity to this level may be seen to be a significant goal for industrial companies across the globe.

Moreover, greater use of asset finance is only one technique for unlocking liquidity, as noted earlier in this paper, alongside other techniques such as receivables finance and inventory finance. So the potential gains for finance directors in industrial companies who harness all methods of addressing Locked Liquidity are more significant still.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Locked Liquidity 2014-2018 (€m)</th>
<th>SME %</th>
<th>SMEs Locked Liquidity 2014-2018 (€m)</th>
<th>Large Companies Locked Liquidity 2014-2018 (€m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1,371,582</td>
<td>39%</td>
<td>534,917</td>
<td>836,665</td>
</tr>
<tr>
<td>India</td>
<td>166,751</td>
<td>39%</td>
<td>65,033</td>
<td>101,718</td>
</tr>
<tr>
<td>United States</td>
<td>137,130</td>
<td>39%</td>
<td>53,481</td>
<td>83,649</td>
</tr>
<tr>
<td>Germany</td>
<td>58,808</td>
<td>28%</td>
<td>16,466</td>
<td>42,342</td>
</tr>
<tr>
<td>Russia</td>
<td>42,169</td>
<td>39%</td>
<td>16,446</td>
<td>25,723</td>
</tr>
<tr>
<td>France</td>
<td>27,932</td>
<td>36%</td>
<td>10,055</td>
<td>17,876</td>
</tr>
<tr>
<td>Turkey</td>
<td>27,788</td>
<td>45%</td>
<td>12,505</td>
<td>15,283</td>
</tr>
<tr>
<td>Spain</td>
<td>18,663</td>
<td>51%</td>
<td>9,518</td>
<td>9,145</td>
</tr>
<tr>
<td>Poland</td>
<td>16,609</td>
<td>37%</td>
<td>6,145</td>
<td>10,464</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>12,152</td>
<td>38%</td>
<td>4,618</td>
<td>7,534</td>
</tr>
</tbody>
</table>

\(^{34}\) Examples: Forbes, Private manufacturers growing sales, profitability, 13 February 2013; Yardeni Research, S&P 500 sectors and industries profit margins; PIMCO, J Longhurst, Viewpoint, May 2012; Roland Berger, Global automotive supplier study, 9 September 2013;
Conclusion

This study from SFS has revealed a significant reserve of untapped liquidity potential in manufacturing industry across the globe. The use of asset financing tools, such as leasing, to unlock that liquidity is becoming increasingly urgent in all the countries studied. As credit conditions have tightened (possibly in the long-term), mature industrial countries need to make the most efficient and effective possible use of working capital. In rapidly growing industrial infrastructures, the pressure is conversely to obtain access to the finance necessary to fuel that growth, but also to make it sustainable in the long-term.