HSBC Global Research

17 November 2021

China easing

Time for a RMB2trn tech and green stimulus package

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Economics - China

- We think the central bank could provide over RMB1trn to banks to encourage more green loans…
- …and central government could spend another RMB1trn supporting core technologies, including green technology
- This would help offset the impact of the property slowdown and keep GDP growth above 5.5% in 2022e

The backdrop: China's economy continues to slow with rising pressure on the labour market. The young are particularly impacted as many job-hungry graduates are struggling to find high-skilled and well-paid jobs. At the same time, both business and consumer confidence is falling, exacerbating the growth slowdown. All this calls for more decisive action to shore up economic growth. While Beijing has started to loosen restrictions on property lending, this is more aimed at reducing contagion risks and cushioning the slowdown, rather than propping up the economy.

Going green, tackling tech: We believe that rolling out a tech and green-focussed stimulus package would be the best policy option for shoring up the economy and provide high-quality jobs. Doing so would: **1)** boost domestic demand, **2)** offset the growth drag from the property market, and **3)** redirect capital towards high-tech and green projects. In addition, such measures are aligned to the longer-term goal of technology self-sufficiency and decarbonisation.

Calculating a potential RMB2trn package: We see a possible RMB2trn (see Table 1 on p.4) tech and green stimulus package, equivalent to around 2% of GDP, and made up of two main components. First, the central bank could release over RMB1trn in green re-lending, which translates into over RMB1.7trn for new bank lending to green projects. Second, the central government could increase public spending on core technologies and infrastructure by issuing green sovereign bonds (up to RMB1trn) to support green investments, such as upgrades to the power grid. Other large-scale initiatives like recent COVID-19 bonds have been around this size. We stress that since most green projects involve upgrades to technology and equipment, investments in such projects tend to have higher output multipliers than real estate. Combined with industrial funds and more generous tax incentives for technology upgrading, such measures would attract more private capital into medium and high-tech manufacturing and green projects. This would not only help engineer a modest recovery in GDP growth to above 5.5% in 2022, but also cultivate new drivers of growth for the years ahead.

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Getting smarter and greener

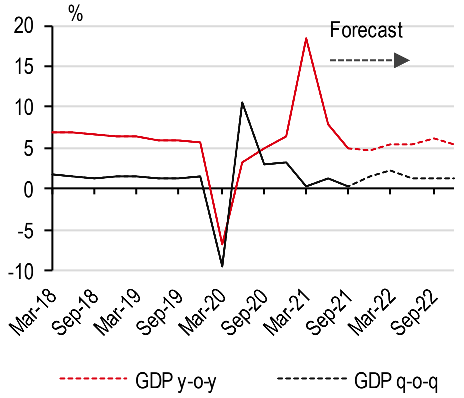
- Rising labour market pressure calls for more action to shore up economic growth
- We believe a RMB2trn tech and green stimulus package would be the best policy option….
- …and is also aligned with key longer-term development goals

The labour market is under pressure

Facing multiple headwinds, China continues to slow. Last quarter the economy sharply decelerated to 4.9% y-o-y, well below the pre-pandemic growth rate of 6% and the potential growth rate. While growth for the whole year can still be above 6% given the rapid clip in H1, the current slowdown is impacting the labour market, especially as rising costs for raw materials cut into the profitability of SMEs, who account for over 80% of urban employment.

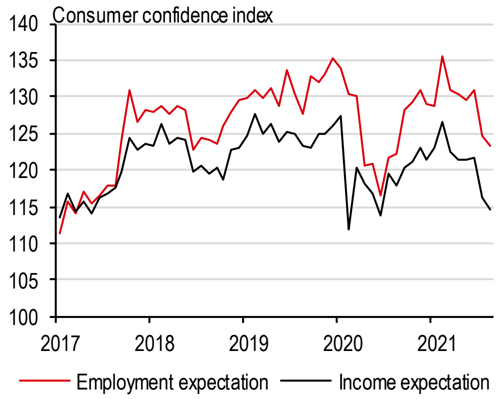
The jobless rate for those aged 16-25 was around 15% in Q3 2021, impacted by the downturn in manufacturing and services in recent months. There is also anecdotal evidence that increasing numbers of university graduates cannot find a highly-skilled job and instead end up in temporary positions such as delivering food (*Sina*, 28 April 2021). And in the recent round of civil service recruitment, there were over 60 applicants for every opening, up 11% y-o-y (*People.cn*, 25 October 2021). Such pressure on the labour market will likely worsen into 2022 when the number of university graduates is set to reach a record high of 10m.

Chart 1: GDP growth has slowed sharply in H2 2021…



Source: CEIC, HSBC forecasts

Chart 2: …leading to weakening consumer confidence index



Source: CEIC, HSBC

The sharp economic slowdown, plus the regulatory crackdown, is taking its toll on both business and consumer confidence. Both manufacturing and service PMIs have already fallen into the contraction zone while measures of the SME sectors have dropped more sharply. Meanwhile, consumer confidence is also weakening. If this downturn in confidence across the economy is not halted soon, it will likely lead to slower growth in both business investment and consumer spending, which in turn will further hit confidence and slow the economy further.

Why tech and green is the best option

For Chinese leaders, stability, especially labour market stability, is always a top priority. This is particularly true for 2022 when the 20th Party Congress will be held. As a result, we expect Beijing to bolster its efforts to support growth in the coming months. The key question is what they might do. Some may argue that reversing the property tightening measures would be the easiest way to prop up growth given it makes up substantial part of the economy. Indeed, recent weeks have seen some marginal easing in both mortgages and lending to developers. But the purpose of these measures is to reduce contagion risks rather than prop up the housing market, in our view. As we have argued in previous research, all the main indicators suggest that China's property market is reaching its limit in terms of home ownership levels and investment directed towards the sector. Any attempt to engineer a property rebound may plant the seed for problems down the road. In fact, policy makers have made it clear that they will not prop up the property market to support economic growth.

We believe that launching a RMB2-3trn technology and green stimulus package would be the best policy option for the following reasons:

- This could boost domestic demand and help offset the GDP growth drag from the cooling housing market. Additional spending on "core" technology should bolster the recovery in medium and high tech manufacturing. This is especially important as manufacturing is bigger than the property sector in terms of both investment and employment contribution, so increasing manufacturing capital expenditure should help offset the negative impact of the slowing property market, helping to stabilize the labour markets. More investment into renewable energy and other green projects would not only create more high-quality jobs, but also increase demand for products from the higher-tech manufacturing sector, reinforcing the recovery in manufacturing capex.
- More importantly, such a package could also facilitate the transition away from the reliance on construction as the growth engine and instead towards higher-end manufacturing and green investment. Reallocating capital away from real estate towards more productive manufacturing and clean energy is crucial to lifting productivity growth, a must for the country to escape the middle income trap. So increasing public spending on key technology, including green technology, and providing more lending to industrial upgrading could help attract more private capital into higher tech and greener sectors, making productivity a more important driver of growth in the coming years.
- A technology- and green-centric stimulus policy is also aligned to Beijing's longer-term goals of high-quality development and decarbonisation. Even before the COP26, Beijing had already set an ambitious target of reaching peak emissions by 2030 and carbon neutrality by 2060. This means at least RMB200trn of investment is needed to "green" the economy in the coming decades. The current energy crisis also makes green investment a more urgent task. At a time when domestic demand is weak, the government could speed up public spending on areas that need more investment in the medium and long term.

Table 1: We expect a RMB2-3trn green and tech stimulus package

Policy tool	Amount	Details
Green relending tool	Around RMB1trn	National banks have been asked to extend green loans at market rates benchmarked to the current loan prime rate (LPR, which is at 3.85% for one year), and then they can apply for one-year funding from the PBoC to cover 60% of the loan principal with an interest rate of 1.75%. We expect the central bank to issue at least RMB1trn (Yahoo, Nov 9) in green relending to support green investment over the next several years, which could create over RMB1.7trn in additional new bank loans to finance green projects.
Sovereign green bonds	Up to RMB1trn	Sovereign green bond issuance will also be a valuable tool to drive public spending on decarbonisation and can catalyse the local government green bond market. Other large-scale initiatives like recent COVID-19 bonds have also been around this size.
Budget spending on science and technology	Additional RMB100bn (c.f. RMB900bn+ in 2021)	Budget spending on science and technology is estimated to rise 1.8% to RMB925bn this year according to the government's budget report. Next year, we expect a bigger budget bill to support research and development in science and technology.
More tax cuts and fee reductions for tech and green transformation	Notable increase from an estimated RMB700bn this year	Possible new tax incentives include increasing tax deductions for equipment purchases used for green transformation and expanding VAT refunds for R&D equipment purchases for all manufacturing businesses.

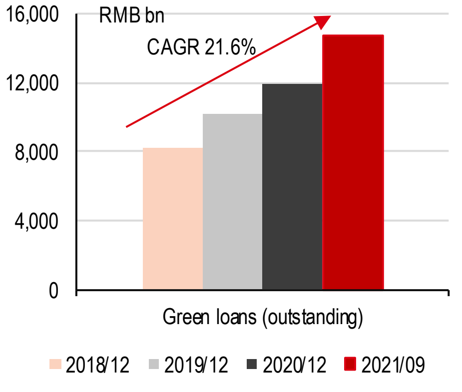
Source: PBoC, HSBC

PBoC's green relending

On 8 November, the PBOC rolled out a new liquidity tool to offer cheap funding to banks that extend green loans. The way this green relending tool works is similar to the relending tool support for SMEs, albeit with a lower rate and potentially more interest from banks. In the early stages, only national financial institutions, including state-owned banks, joint stock banks, and policy banks are eligible. They are asked to extend green loans at market rates benchmarked to the going LPR (3.85% one year) and then they can apply for 1-year funding from the PBoC to cover 60% of the loan principal with an interest rate of 1.75%. The funding from the PBoC can be rolled over twice. The announcement did not indicate how much green re-lending the central bank plans to issue, but we do not expect there to be any hard constraints. Given the slowing economy, we expect the central bank to issue at least RMB1trn of green relending to support green investments, which could attract over RMB1.7trn in additional new bank loans to finance green projects. This could add 10 percentage points to the total amount of green loans outstanding, which has already registered a CAGR of 22% in the last four years.

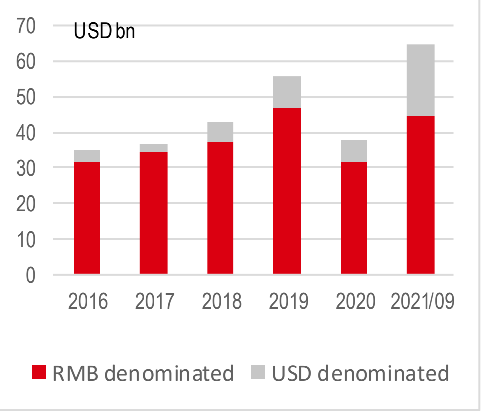
We also expect high participation rates from financial institutions this time. Unlike the SME relending scheme, many ultimate borrowers will be large enterprises at least in the initial stages. As discussed in previous sections, we envision early projects to cover grid upgrading and industry efficiency gains, hence borrowers are likely to be large SOEs. In general, loans to such borrowers are considered high credit quality and are often sought after by banks.

Chart 3: China's outstanding green loans have grown fast in the past several years



Source: Wind, HSBC

Chart 4: Green bond issuance (esp. offshore) also increases steadily



Source: Climatebond, Bloomberg, HSBC

Fiscal stimulus goes smart and green

Government to lead green investment, private sector to follow

The central government and SOEs will likely take the lead in green investment, becoming the catalyst for private participation. For infrastructure projects, governments and SOEs are typically in a better position to make investments. Examples include the development of the power grid system to improve the efficiency of electricity transmission and distribution. As for tech investments, R&D in frontier technologies may not be financially attractive for private investors in the early stages, so again governments are better able to step in early. In some way, this resembles the role governments played decades ago in traditional infrastructure investment.

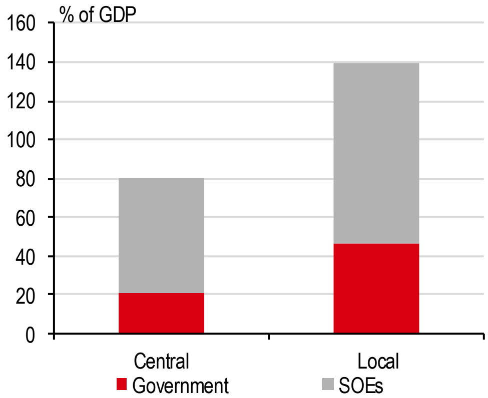
That said, this time could be different, when it comes to who takes primary responsibility. Following the Global Financial Crisis, the central government budgeted only RMB1.12trn for its planned RMB4trn stimulus package, with the remaining funding coming from local governments. Local governments in turn set up special purpose vehicles (aka local government financing vehicles or LGFVs) to borrow from financial institutions and the capital market. This time, it is likely to be the central government and state-owned enterprises (SOEs) who will play the driving role, at least in the early stages of funding the green transformation. There are two main reasons why we think the central government and SOEs would take the lead.

First, some green infrastructure projects are going to be national projects. For example, a key part of the power grid system upgrading plan is to build new renewable energy bases in the desert and ultra-high-voltage (UHV) electricity transmission lines to transmit electricity to power-hungry regions, which will be carried out by central SOEs (e.g. State Grid).

Second, the central government has abundant fiscal room to support large investment bills. By comparison, local governments are facing increasingly tight fiscal constraints that are likely to continue in the near term: the ongoing housing market correction could result in a substantial loss of land sales proceeds, which accounts for c40% of local government revenue. Some local governments are also carrying baggage from legacy LGFV debt, which is facing increasing scrutiny from Beijing.

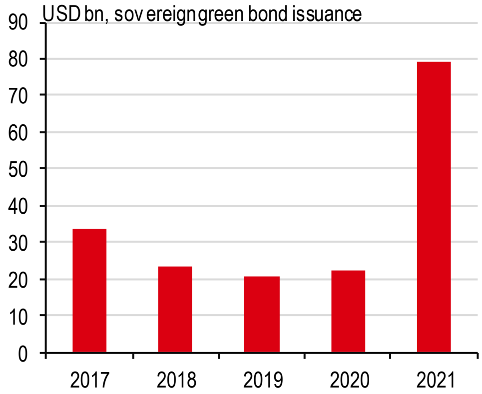
Moreover, a relatively low leverage ratio gives the central government and central SOEs more room for debt financing than local governments. We estimate that local governments' on-balance-sheet debt accounted for 46.4% of GDP at the end of 2020, while the central government's debt was only 20.6% of GDP. Meanwhile, debt held by local SOEs (including local government financing vehicles) amounted to RMB91.4trn at the end of 2019, nearly double the amount of the central SOEs' debt at RMB58.4trn. Combined, public debt at the central level accounts for around 80% of GDP, while local public debt is much higher at around 140% of GDP.

Chart 5: Local authorities and SOEs account for two thirds of public debt



Source: CEIC, HSBC

Chart 6: Global sovereign green bond issuance has surged in recent years



Source: Bloomberg, HSBC

Altogether, the capacity and willingness of local governments to invest in mega projects may be constrained. Hence, it is likely that the central government and SOEs would do the heavy-lifting in green investment this time around.

Sovereign green bond on the table

To fund public spending on decarbonisation, Beijing could lean on sovereign green bond issuance. That would be a similar playbook to other developing and developed markets as the OECD says nineteen sovereigns have now issued green bonds exceeding USD130bn. Investor demand is on the rise for such assets too. Driven by the premium pricing in the secondary markets, several sovereign green bond issuers in H1 2021 enjoyed tighter pricing, including Germany, France, Indonesia, the UK, the EU and Hong Kong.

Besides providing funding for public spending, we believe sovereign green bonds could catalyse the local government green bond markets later. Once sovereign bonds provide benchmark pricing and liquidity, local governments may enter the market too, especially if green sovereign bonds were to receive an enthusiastic response from investors. Beijing could consider issuing multi-currency green sovereign bonds for the onshore and offshore markets: CNY-denominated sovereign bonds could attract domestic institutional investors and also northbound inflows from international investors via Bond Connect; CNH/HKD-denominated bonds could provide additional assets for the newly launched southbound Bond-Connect (*Hong Kong Monetary Authority*, 24 September); while USD/EUR-denominated green sovereign bonds could make a splash in the offshore market.

Back in 2020, Beijing issued RMB1trn of COVID-19 sovereign bonds. This provided timely funding for local governments' efforts to contain the virus, and helped Beijing rescue the economy and provide jobs during the difficult times. Similarly, as decarbonisation becomes a key policy goal for the next 40 years, sovereign green bond issuance will also be a valuable tool as China seeks to decarbonise and build a more sustainable economy.

Ramping up public spending on tech upgrading

China's strategy of boosting R&D investment is likely to gain more traction in 2022 and beyond. Beijing this year has said advancing innovation-driven development and industrial upgrading is a key focus for fiscal spending. Extra tax deductions on R&D costs have been raised from 75% to 100% for all manufacturing enterprises. The government has also refunded all due VAT credits to advanced manufacturing enterprises on a monthly basis, which should help improve their capital positions. Budget spending on science and technology is estimated by both central and local governments to rise 1.8% to RMB925bn this year. Next year, we expect budget spending could edge up to RMB1trn given China is prioritizing research and development in science and technology.

In addition, the government has provided funding for strategically important sectors through state-backed funds. For example, the National Integrated Circuit Industry Investment Fund, created by the central government in 2014 with registered capital of around RMB98.7bn, has doubled its registered capital in 2019 for its second phase of funding. The fund provides concrete support for building an independent and self-sufficient industrial chain for the Chinese integrated circuit industry. In recent years, the government has also extended this kind of state-backed funding to green transformation efforts. The first national-level green-focused investment fund, the National Green Development Fund, was established last year with registered capital of RMB88bn. We expect further expansion in public investment in strategically important sectors through state-backed funds in the near future.

More tax incentives to be introduced to boost private investment in new growth drivers

Besides direct public investment in new growth drivers, we believe subsidies and tax incentives will be improved to "crowd in" more private sector investment. In recent months we have seen Beijing ramp up efforts on this front. The State Council has said that it is studying its next large-scale tax-reduction policy for market entities. This suggests that the amount of tax cuts and fee reductions in 2022 could notably increase from an estimated RMB700bn this year. We believe there are multiple areas where Beijing can improve its preferential tax treatments for tech upgrading and green transformation, including the following:

- **Expanding preferential tax treatments for R&D spending and automation from high-tech manufacturing sectors to all manufacturing sectors.** Beijing has made progress on this front in recent years, including raising extra tax deductions on R&D costs from 75% to 100% for all manufacturing enterprises. But we believe more can be done, such as expanding value-added tax (VAT) refunds for R&D equipment purchases from currently only high-tech companies to all manufacturing businesses;
- **Raising tax deductions for equipment purchases aimed at green transformation efforts.** Currently only 10% of the investment cost of energy-efficient or water-saving equipment purchases can be deducted from a company's profits. However, this ratio is as high as 100% in the EU. To incentivise corporate investment on this front, Beijing could meaningfully raise the tax deduction ratio.
- **Rolling over tax exemptions and subsidies for purchases of new energy cars and energy-efficient household appliances.** In 2020 Beijing announced the vehicle purchase tax exemption for new energy vehicles for 2021 and 2022. Local governments in many provinces have also provided subsidies for new energy vehicles and household appliances. We expect authorities to step up policy support for both new energy production and consumption, as well as for households to upgrade vehicles and household appliances to more energy-efficient models next year.

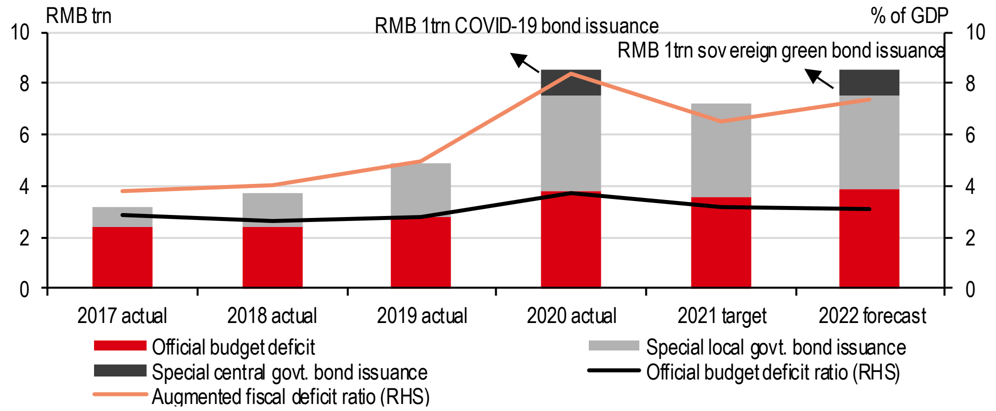
Table 2: China R&D tax incentives at a glance

Tax incentive type	Targeted firms	Tax incentive measures
Expenditure-based	For all firms	Tax allowance: 100% of super-deduction on R&D expenditure Accelerated depreciation of R&D capital Loss carry forward for 5 years
	For HNTEs	Loss carry forward for 10 years (for HNTEs and technological SMEs) 8% tax credit for the staff educational fund VAT exemption for R&D equipment for qualified enterprises
Income-based	For all firms	Technology transfer: exempted from income tax and VAT
	For HNTEs	Deferred tax payment for R&D personnel 15% income tax rate (compared to a standard rate of 25%) Preferential taxing of employees' income earned under eligible stock incentive plans
	For software industry	Exemption of VAT, exemption of income tax for first two years, 10% on income tax for key firms
	For integrated circuit industry	Exemption of VAT, exemption of income tax for first two years, 10/15% on income tax for key firms
	For VCs that invest in technological enterprises	Income tax credit

Source: *www.gov.cn*, HSBC
Note: HNTE = High and new technology enterprises

All in all, we believe Beijing will increase the fiscal impulse mainly through more tax cuts and public spending on tech upgrading and green transformation. The amount of local government special bond issuance quota is also likely to be stable at RMB3.65trn to support government financing at the local level amid a possible loss in land sales revenues. More importantly, we expect the central government to jump-start the sovereign green bond market with issuance of RMB1trn. If all this is issued in 2022, it would increase the total fiscal deficit by 0.9ppt. Such a strong fiscal impulse would provide a cushion for GDP growth against the weakness in the real estate market.

Chart 7: A RMB1trn central government green bond issuance would increase the fiscal impulse by 0.9ppt, if all issued within 2022



Source: CEIC, HSBC forecast

What exactly is green investment?

One year after President Xi committed to carbon emissions peaking by 2030 and carbon neutrality by 2060, China is rolling out the so-called "1+N" framework along with details of an official road map to achieve climate targets. The mega plan involves an overarching Guideline (the "1" part) setting specific goals on changes to the energy mix, carbon intensity and structural reforms over time, as well as the policies addressing all sectors and regions (the "N" part).

Where to start?
Energy and industrial sector decarbonisation is critical for China to reach its climate target. Some areas, particularly such as upgrading the power grid, require immediate investment. Other priorities could be given to low-hanging fruit like improving energy efficiency. For the reasons stated above, we focus on areas where either governments or SOEs can play a dominant role.

Upgrading power grids
Clean energy installed capacity: For power sector decarbonisation, the goal is to increase the installed capacity of wind and solar power to 1200GW by 2030, from the 2020 level of 530GW. Over the years, the cost of clean energy has fallen due to technology innovation and because the industry has matured. Let's assume the installed cost for wind/solar power averages at RMB3 per watt, lower than the prevailing rates (solar: RMB3.5 per watt, onshore wind: RMB6.8 per watt, offshore wind: RMB12-17 per watt). That means an additional 530GW of installed capacity requires RMB2trn investment, and if evenly distributed, RMB1trn of investment will be made during the 14^{th} Five-year Plan (FYP).

UHV transmission lines: Investment also needs to be made to upgrade the power system. For example, China is planning to build large renewable energy bases in sandy areas, rocky areas and deserts. The first phase, with an installed capacity of approximately 100GW, has recently started construction. HSBC analysts Corey Chan and Dun Wang estimate that an additional 12 ultra-high voltage (UHV) DC lines with an average capacity of 8GW/line are needed to transmit power from the west of the country to the east (西电东送), amounting to cRMB240bn investment during the 14th FYP.

Smart grid: In addition to electricity transmission, improving distribution efficiency relies on upgrades to the smart grid. In broad terms, a smart power grid involves the entire supply chain generation to transmission, and distribution (including demand response). In a narrow sense, smart power grid refers to secondary equipment (equipment to monitor and gather data from the primary equipment like transformers). In China, secondary equipment spending was only c10% of total equipment spending in 2020 vs 17% for International Energy Agency (IEA) countries on average. There is still room for more penetration, yet the amount of investment will likely be much smaller than UHV transmission and other new infrastructure types of investment. Historically, investment in secondary equipment accounted for c10% of total grid investment. If we follow this, then cRMB25bn of investment would be needed to be compatible with the cRMB240bn UHV transmission line investment.

Energy storage capacity: The recent power crunch in China reflects some level of vulnerability to China's electricity system. This includes a lack of energy storage to smooth out the cycles of clean energy. In a nutshell, energy storage can store electricity when solar and wind power over-generates, and release it at times of under-generation. According to HSBC analysts Corey Chan and Dun Wang, there are two major storage technologies: battery energy storage systems and pumped hydro-electric storage. They expect the latter to be more favoured due to cost, capacity, and safety concerns. A recent long-term plan by the National Energy Administration (NEA) (抽水蓄能中长期发展规划(2021—2035 年)) targets to grow the pumped hydro-electric energy storage capacity to c60GW in 2025 and 120GW in 2030, from the 2020 level of c30GW. In an early consultation paper about the long-term plan for pumped hydro-electric storage, the NEA set out a more aggressive plan to reach 300GW installed capacity by 2030, and estimated some RMB1.8trn in investment will be needed in the next 15 years. A simple interpolation suggests RMB300bn of investment is needed to reach c60GW of capacity by 2025.

Summing up, a quick calculation suggests some RMB1.5trn of investment is needed in selective areas of green power during the 14th FYP (Table 3). Notably most of them have the characteristics of infrastructure investment: large initial costs, medium to long-term construction times (for example, on average, a pumped hydro-electric storage takes seven to eight years to build), and substantial externalities (i.e. costs/benefits that aren't fully reflected in the prices).

Table 3: Green power investment (2021-2025e)

Projects	Installed cost
New installed capacity of renewable energy	RMB1,000bn
UHV transmission lines	RMB240bn
Smart grid secondary equipment	RMB25bn
Energy storage capacity	RMB200bn
Total:	***RMB1.5trn***

Source: HSBC

Boosting energy efficiency in industrial sector

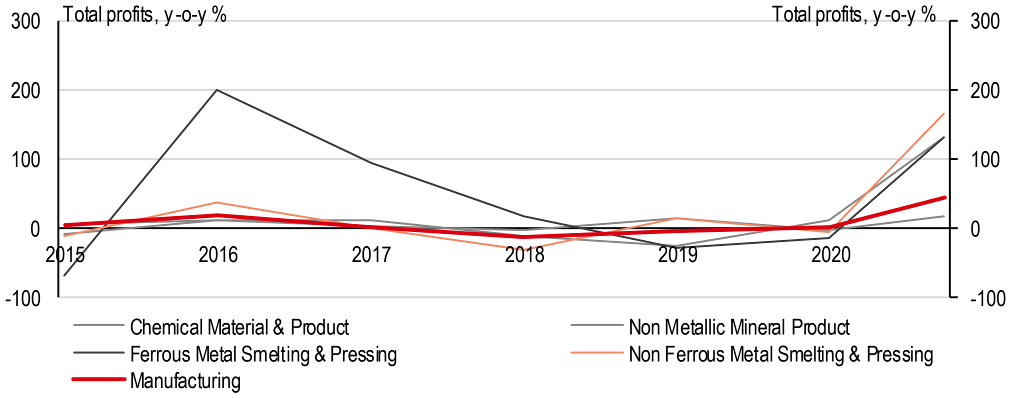
We expect capex to pick up in the heavy industry to enhance energy efficiency and reduce emissions. There are both push and pull factors: the "1+N" framework includes sector specific targets on energy consumption and CO2 emissions which will push industrial enterprises to make green transformations; at the same time, they have accumulated decent profits over the past several years in relation to the property/commodity market rally (Chart 8), so the property investment slowdown provides them a window to catch up with spending, because the power price is rising and soon emission quotas will be costly after these sectors are included in the national carbon emission trading system.[1]

Energy efficiency enhancement is the low-hanging fruit. Concrete measures include closing low efficiency production facilities, upgrading to high efficiency equipment, and consolidating the sector so the remaining survivors can enjoy economies of scale. On 15 November, the National Development and Reform Commission (NDRC), together with the other four central government agencies, rolled out an energy consumption benchmarks for five energy-intensive industries (高耗能行业重点领域能效标杆水平和基准水平（2021 年版）).[2] The new standard will become effective 1 January 2022, and those failing to make the proper upgrades to equipment and meet the new standard within three years will have to cease operations. We hence expect a substantial pickup in related investment.

[1] China launched its national carbon emissions trading system for the power sector in July and will expand it to cover several heavy industry sectors, such as those shown in Chart 1, in the near future (*South Morning China Post*, 19 August 2021).

[2] These industries are: i) petroleum, coal and other fuel processing, ii) chemical material and product, iii) Non-metallic mineral product, iv) smelting & pressing of ferrous metal, and v) smelting & pressing of non-ferrous metal.

Chart 8: Heavy industry sectors have enjoyed handsome profits in the past five years

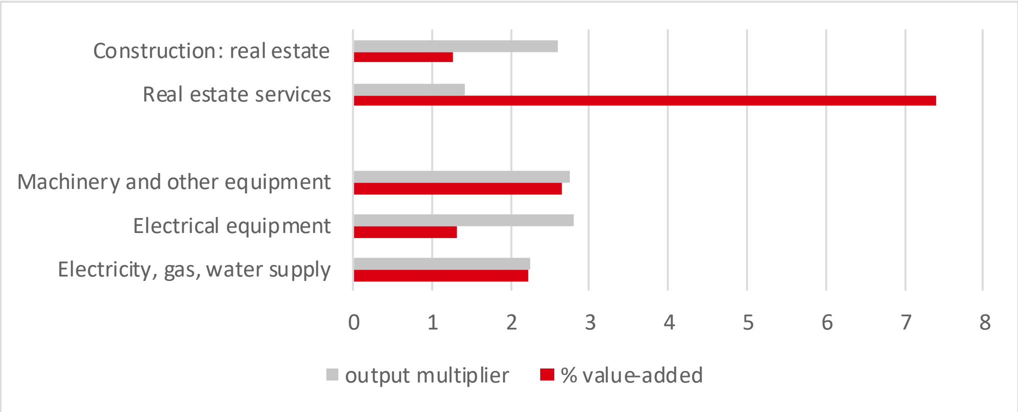


Source: CEIC, HSBC

How big is the multiplier effect of these green investments?

The green transformation by the power and heavy industry sectors mentioned above implies rising demand for equipment as well as electricity (as some processes may directly consume electricity instead of fossil fuels). From a macro perspective, we use the input-output table to quickly gauge how green investment affects the economic growth. Compared to the real estate sector, including real estate services and real estate construction, their direct contribution to GDP is smaller (green projects are 6.2% vs. property with 8.6%). However, their output multipliers are higher than real estate (Chart 9). If annual real estate growth slows by c5ppt, that will provide a drag equivalent to 0.68ppt on GDP growth, i.e., $-5ppt \times (7.4\% \times 1.4 + 1.3\% \times 2.6 = -0.68ppt$. That will require the three sectors (machinery and other equipment, electrical equipment, as well as electricity, gas, water supply) to accelerate by c4.3ppt to fill the gap.

Chart 9: Green projects vs real estate – lower % in GDP but higher multiplier



Source: NBS, HSBC

Conclusions

Beijing's moves to tighten up property-linked lending undoubtedly help mitigate systemic risks, but unavoidably, slow construction activity. Combined with other headwinds, this points to a further slowdown in the economy and employment. To stabilize the labour market, we think Beijing would have to do more to engineer an economic recovery, with the introduction of a RMB2trn tech and green stimulus package the best policy option, in our view. A mixture of green lending, public spending on core technologies and tax incentives for higher tech and green investment would not only boost domestic demand in the near term, but also help ensure high-tech manufacturing and green investment become the new growth drivers for the coming years.

Disclosure appendix

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