

# ESG Summer Series

## Chicken eggs: Race to “cage zero”

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- ◆ The EU is taking the lead on ending the use of small cages to raise animals with plans for a full ban by 2027
- ◆ Restaurant chains and other corporates are also increasingly committed to stop using eggs from cage farming
- ◆ Such pledges are less common in Asia than in the West, but we think momentum is building slowly

This is the 6<sup>th</sup> report in our [ESG Summer Series](#) – looking at sustainability issues in less obvious places. These issues could grow to become bigger trends in the future.

**Cage “outrage”:** More attention is being paid to the welfare of caged animals, particularly egg-laying hens that are confined to tiny spaces that can be as small as an A4 piece of paper. Overcrowded cages limit the normal behaviour of hens, such as walking, the number of eggs they lay, their health and even their life expectancy.

**“Cage-zero” transition:** A number of jurisdictions, including the EU and Australia, have imposed various regulations on cage farming. However, the EU is now planning to move to the next level: phasing out all cages for farm animals by 2027. Some companies in the West are also starting to credibly implement their own cage-free targets, often following active investor engagement. However, there is room for improvement around disclosures of cage-free targets and action plans, in our view.

**Egg-flation?** A full ban on cage farming in the EU will inevitably push up egg prices since cage-free rearing practices are, generally, costlier than cage farming. However, we think the ban will not produce significant egg price inflation as we expect most cage farmers to move to barn systems first. As cage eggs are only c6% cheaper than barn eggs in the EU<sup>1</sup> and cage eggs only accounted for 43% of egg production in the EU (2021), we think the inflationary pressure will be manageable; there is also at the same time potential for economies of scale in cage-free egg production.

**Watch out for Asia:** With global consumers increasingly asking for cage-free eggs, Asia – the world’s largest egg-producing region – is catching up with the West and also starting to phase out cages. For example, India passed a law in 2023 that imposes minimum requirements on the so-called cage system. China released its first standards for cage-free eggs in 2021. We believe the discussion over cage-free practices and regulations will keep evolving in Asia, considering Asian companies are now facing more pressure from their customers outside the region.

*This is a Free to View version of a report with the same title published on 10-Aug-23. Please contact your HSBC representative or email [AskResearch@hsbc.com](mailto:AskResearch@hsbc.com) for more information.*

<sup>1</sup> European Commission, EU Market Situation for Eggs, 20 July 2023

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**Polo Heung**  
Associate, ESG Research  
The Hongkong and Shanghai Banking Corporation Limited

**James Rydge**  
Head, ESG Research, EMEA  
HSBC Bank plc

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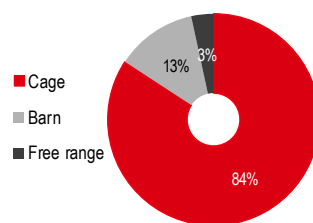
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## What is cage farming?

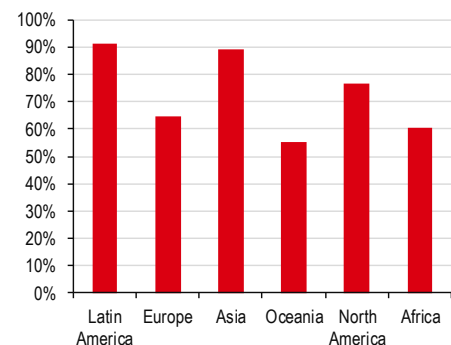
Cage farming is the most common and conventional rearing system for egg-laying hens. Over 84% of global egg production comes from the cage farming system (Figure 2). Cage farming means laying hens are confined to a box or enclosure with limited space. Some jurisdictions have set standards for hen-rearing cages, e.g. a minimum floor area per hen. For example, since 2012, the EU has required cages to have at least 750 cm<sup>2</sup> per hen (equivalent to an area between the size of an A3 and A4 piece of paper).

### 2. Cage farming dominates global egg production (2020)



Source: British Egg Industry Council, HSBC

### 3. Worldwide cage farming share (2020)



Source: British Egg Industry Council, HSBC

### Other types of egg production

**Barn:** Barn farming is where hens are able to move freely within a climate-controlled indoor facility without cages, but hens are not allowed to go outside.

**Free-range:** Free-range rearing allows hens to not only move freely within a shed but also roam outdoor during the daytime.

## Healthy hens, healthy eggs?

Various studies show that cage farming is harmful to the health of laying hens as an overcrowded environment restricts their natural behaviour like wing-flapping and stretching. Also, limited space leads to a higher risk of keel bone fractures, group stress and detrimental behaviour (e.g. injurious pecking)<sup>2</sup>. These factors lower the body weight of hens, lowers egg production rates and increases mortality rates. Therefore, a number of animal welfare associations have been urging various governments, such as the [EU](#) and the [UK](#), and also corporates like McDonald's (branches in Asia) to phase out eggs produced in the cage-rearing system.

In addition to animal welfare, the European Food Safety Authority finds that hens reared without cages have a lower occurrence of salmonella (a common intestine-affecting bacteria)<sup>3</sup>. However, evidence that cage-free eggs are biologically safer than cage eggs is inconclusive, with some studies showing that cage-free hens are exposed to more bacteria and viruses, given their outdoor access<sup>4</sup> (see the case study on bird flu below).

<sup>2</sup> EFSA, Welfare of laying hens on farm, 21 February 2023

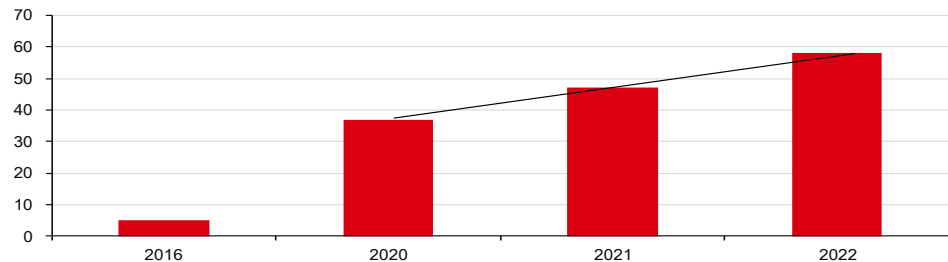
<sup>3</sup> EFSA, Salmonella control in poultry flocks and its public health impact, 18 February 2019

<sup>4</sup> Zhao et al., Environmental assessment of three egg production systems – Part III: Airborne bacteria concentrations and emissions, 1 July 2016

## Is the world transitioning to cage-free systems?

Given the growing awareness of the welfare advantages of rearing hens in an environment without cages, there is rising consumer demand for eggs produced in this way. In fact, the number of companies with global cage-free egg commitments has increased from five (2016) to nearly 60 (2022), including Yum Brands, Barilla and Danone (Figure 4).

### 4. Corporate global cage-free commitments are increasing



Source: HSBC based on EggTrack Review Reports (2020, 2021, 2022)






Also, shareholders have been asking restaurant chains, retailers and hospitality groups to commit to sourcing cage-free eggs and reporting progress towards their targets by tabling proposals.

- ◆ In the 2023 proxy season, the Humane Society of the United States tabled a shareholder resolution which asked **Mondelēz International** (formerly Kraft Foods) to disclose annually the progress of its global cage-free egg goal.
- ◆ In **Kellogg's** 2016 annual general meeting, 96% of shareholders voted to support its cage-free policy.

Despite the rising number of global cage-free commitments, the majority of them are from companies based in the West as awareness and interest in cage-free rearing in Asia is still low. However, we think animal welfare sentiment is now spreading to Asia as more Asian companies are facing criticism from animal welfare groups about their egg sourcing policies, while consumers are also increasingly asking for cage-free eggs. For example, animal welfare coalition Open Wing Alliance (OWA) said in June 2023 that Jollibee, a Filipino fast food chain, uses more than 586 million cage eggs annually<sup>5</sup>.

Nevertheless, egg farmers need to overcome several challenges to transition to a cage-free system, including factors related to cost, disease management, and food safety (Figure 5). Annual costs of cage-free systems are estimated to be 8-19% higher than those of the cage system. We believe the extra capital expenditure and operating expense of cage-free farming can be passed to customers in developed markets, which tend to have a higher demand for cage-free eggs (Fig.6).

### 5. Barriers for cage-free system transition

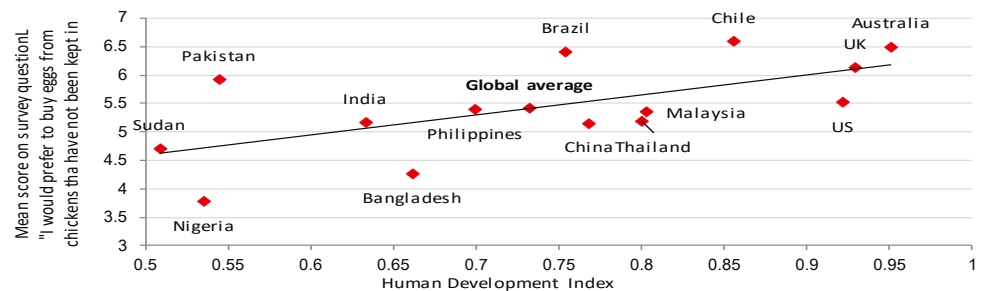
	<b>Capital requirements</b>	<ul style="list-style-type: none"> <li>Cage-free systems require at least 2 times the capital than caged facilities</li> </ul>
	<b>Labour requirements</b>	<ul style="list-style-type: none"> <li>Cage-free systems require 2-3 times more labour than caged facilities</li> </ul>
	<b>Use of resources</b>	<ul style="list-style-type: none"> <li>Cage-free systems require 2-3 lbs/100 hens more feed than caged facilities</li> <li>Cage-free systems have larger carbon and water footprints than caged facilities</li> </ul>
	<b>Disease management</b>	<ul style="list-style-type: none"> <li>Free range hens have higher risks of being exposed to pathogens and bacteria but they might have better immune response</li> </ul>
	<b>Egg quality</b>	<ul style="list-style-type: none"> <li>Cage-free eggs have higher risks to have manure stains and cracks in the shells</li> </ul>

Source: Michigan State University<sup>6</sup>, HSBC

<sup>5</sup> Eco-Business, Asia's fastest growing restaurant chain faces pressure over animal cruelty, 5 June 2023

<sup>6</sup> Caputo, et al., The Transition to Cage-free Eggs, February 2023

## 6. Developed markets prefer cage-free eggs



Source: Sinclair, et.al.<sup>7</sup>

### Case study: Outbreak of bird flu led to an egg shortage in the UK (2021-23)

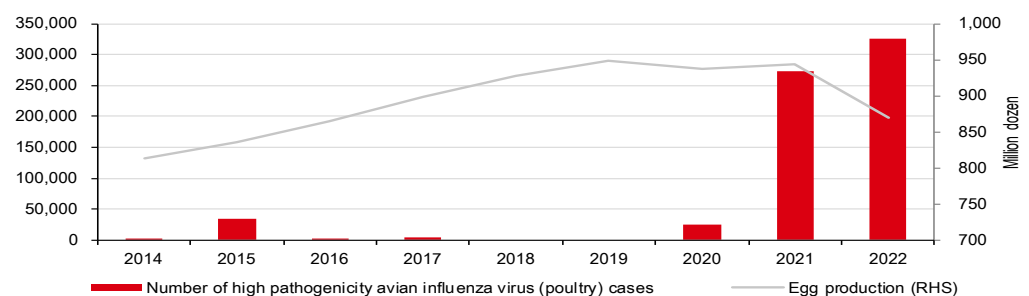
As free-range hens can move outdoors, their exposure to wild birds and external viruses is higher compared to hens kept in cages and, as such, are more vulnerable to outbreaks of bird flu.

In the UK, an outbreak of avian flu started in October 2021 and worsened in 2022, resulting in over 200,000 bird deaths. To control the disease, the UK killed and disposed of more than seven million wild and domestic birds in 2021-22. Also, the [UK government](#) required commercial and backyard birds in England and Wales to be kept indoors in response to the outbreak (the order was lifted on 18 April 2023).

The mandatory housing measures made the operations of UK free-range egg farmers more challenging, which came in addition to the significant inflationary pressures they were facing at the time. As free-range rearing is generally costlier than barn farming, free-range eggs usually sell at a premium. However, farmers cannot label their eggs as “free-range” if the hens have been kept indoors for more than 16 weeks. Under the regulations, they had to label their eggs as “barn eggs”, which command a lower price even though farmers’ costs remained high. This forced some egg farmers to exit the business, with others reducing or failing to replenish their flock. Given that free-range eggs account for c60% of [total egg production in the UK](#), total egg production in 2022 dropped significantly (Figure 7), leading to a severe egg shortage.

Still, despite free-range hens being more vulnerable to diseases, this impact can be mitigated by vaccinating free-range poultry against bird flu, according to the World Organisation for Animal Health (WOAH). We expect to see more countries considering poultry vaccinations after this wave of avian flu, albeit there may be a potential trade impact on vaccinated poultry products. Some countries are concerned that vaccinated birds may still carry and transmit the bird flu virus. They, therefore, would consider restricting the import of vaccinated poultry meat and live birds. A survey by the WOAH shows only 25% of its members would accept imports of vaccinated poultry products<sup>8</sup>.

## 7. Number of confirmed bird flu cases and egg production in the UK (2014-22)



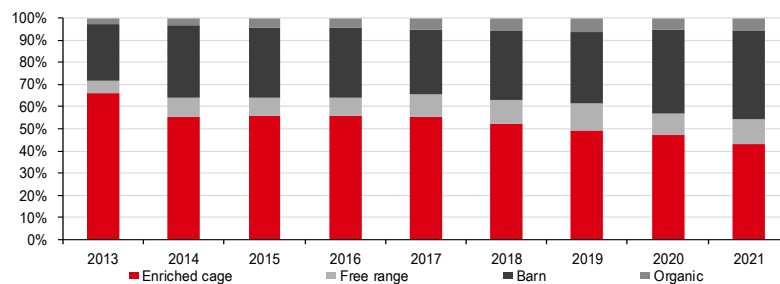
Source: World Organisation for Animal Health, Department for Environment Food & Rural Affairs of the UK, HSBC

<sup>7</sup> Sinclair, et.al., Consumer attitudes towards egg production systems and hen welfare across the world, 12 October 2022  
<sup>8</sup> WOAH, Strategic Challenges In The Global Control Of High Pathogenicity Avian Influenza, May 2023

## Regulations

The EU was an early adopter of imposing minimum standards to protect hens reared in cages. Since 2012, the EU has banned battery cages with an area of less than 750cm<sup>2</sup> per laying hen. Enriched cages, however, still remain in use and accounted for nearly 45% of egg production in the EU in 2021 (Figure 8). The European Commission aims to table a legislative proposal by the end of 2023 to phase out the use of cage systems for all farm animals, including hens, sows and calves, by 2027 under the Farm to Fork Strategy. Australia, New Zealand, Canada and some states in the US have also declared they will follow the EU's regulation to ban battery cages.

### 8. Cage farming capacity in the EU (2013-21)



Source: European Commission, HSBC

In the context of protecting laying hens, Asia lags behind Western countries, even though the region accounts for approximately 70% of global egg production. India is one of the few Asian countries that have restrictions on battery cages. The Ministry of Fisheries, Animal Husbandry and Dairying issued the [Prevention of Cruelty to Animals \(Egg Laying Hens\) Rules, 2023](#) in February 2023. The new rules require all new farms, or replacements of old cages, to have at least 550 cm<sup>2</sup> of floor space per laying hen. This threshold is lower than in other countries (e.g. the EU, New Zealand and Australia), but it signals rising awareness in Asia.

### 7. Regulations on the cage-rearing system (egg-laying hens)

Jurisdiction	Current status	Implementation year
EU	In force (set to propose to ban all cage farming)	2012
New Zealand	In force	2023
Australia	Endorsed by state ministers	2036
UK	In force	2012
Canada	Industry standard	2036
US	Varied by state*	Varies by state*
China	Guidelines	NA
India	In force	2029

\*As of April 2023, 10 states in the US (California, Colorado, Massachusetts, Michigan, Nevada, Ohio, Oregon, Rhode Island, Utah, and Washington) had instituted policies addressing battery cages. NA – Not applicable/available.

Source: USDA, European Commission, The Guardian, DAFF of Australia, CBC

## Conclusion

The EU's proposal to phase out all cage farming is likely to induce more debates about animal welfare and cage farming later this year, in our view. This time, we think Asian companies and countries will be put under more pressure than in 2012 (when the EU banned non-enriched cage systems). Despite having the largest share of the world's egg production, only c10% of flocks in Asia are cage-free. In our view, large restaurant groups, food processors and manufacturers in Asia are likely to be urged to phase out cage eggs by animal welfare groups and their customers, while more Asian governments may consider setting minimum standards for cages. We also think Western companies will face rising scrutiny over the implementation of their cage-free commitments and how forthcoming they are in their disclosures.

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