

Jan 8 2021

Environment Regulation AI

3 Shifts Edition (Jan 8 2021): US bans anonymous shell companies, EPA prioritizes studies that use public data, OpenAI's DALL-E text-to-image model

🕒 7 min read

Listen on:   

1. The US Corporate Transparency Act effectively bans anonymous shell companies

- In a year that has already highlighted the divides in the US, the passing of the **National Defense Authorization Act (NDAA)** was a notable example of bipartisan agreement. Congress overwhelmingly voted on Jan 1 to override the presidential veto of the NDAA (2021). The \$740B spending bill included a landmark piece of legislation called the **Corporate Transparency Act, which effectively bans anonymous shell companies from being formed in the US**. The measure is expected to reduce the United States' role as a leading haven for financial secrecy (which can enable money laundering, tax evasion, and terrorism financing).
- The Corporate Transparency Act **requires new corporations and limited liability companies (LLC) to confidentially disclose the name, address, birthdate, and a unique ID (e.g. passport number) for the entity's beneficial owner(s)** to the Treasury Department's Financial Crimes Enforcement Network (FinCEN). A beneficial owner is defined as an individual who owns a 25% stake, has "substantial control," or receives "substantial economic benefits" (with exclusions for agents, employees, and creditors).

- **Existing corporations and LLCs must also disclose beneficial owners within two years** of the Act taking effect (after Treasury regulations are issued, expected later this year). Companies must also update FinCEN within one year of any changes. FinCEN will manage the private database with entity data and share with financial institutions and law enforcement as needed and upon request. **Willfully providing false information or failure to report is punishable by up to \$10K in fines and 2 years in prison.**
- **Certain companies are excluded from reporting requirements**, including wide classes of publicly traded, regulated, nonprofit, and pooled-investment entities. Companies with 20+ full-time US employees, \$5M+ annual revenue, and a physical US office are also exempt. Among legitimate companies, **most of the new requirements will be borne by very small startups and businesses, along with their owners and investors.**
- **This is a radical overhaul of corporate regulation in the US**, which puts the onus of reporting on companies rather than banks, and the onus of collecting on the federal government rather than state governments. The Act has broad support from both parties, as well as law enforcement, business groups, and the State of Delaware (where many companies are registered).
- The Act will make it **harder for people to hide and use proceeds from illegal or corrupt activities** (e.g. laundering by drug cartels and human traffickers, real-estate investment by kleptocratic foreign leaders), or avoid paying taxes on those proceeds. For instance, one NY Federal Reserve study found that loss of anonymity resulted in a 70% decline in all-cash transactions by corporations. The Act also makes it **harder to set up a company for the purpose of committing a crime or other unsavory activity** (e.g. bribery, hush money).
- **Enthusiasm for anti-corruption transparency legislation has been growing since 2017**, inspired in part by a 2016 Global Witness report, NYTimes investigatory series from 2016-2018, and 2016 leak of the Panama Papers. Some have viewed the US – where almost 2M corporations and LLCs are formed each year – as the **easiest country in the world to form anonymous shell companies.**
- **The US joins a growing global effort among developed nations to crack down on anonymous shell companies.** The UK and the EU both have similar disclosure requirements. While the US has a history of not sharing tax information with other countries, the Corporate Transparency Act **specifically allows for sharing of entity ownership information with US allies in support of investigations.**
- **Certain industries will benefit from the regulation.** It will make it easier for the banking industry – which has been supportive of the new law – to comply with prior requirements that banks identify real account owners. Other financial institutions can also participate in FinCEN information-sharing to help them comply with customer due diligence requirements. However, it still remains to be seen what the Treasury's regulations will look like once issued – and how effectively they can be enforced.

Related Content:

- Sep 2 2020 (Brief #38): The future of the global stock exchanges

- Apr 15 2020 (Brief #30): Geolocation tracking & the expansion of government surveillance

2. Controversially, the EPA will prioritize studies based on publicly available data

- The US Environmental Protection Agency (EPA) put a new rule into effect this week called “Strengthening Transparency in Pivotal Science Underlying Significant Regulatory Actions and Influential Scientific Information.” It requires the **prioritization of scientific studies that are based on publicly available underlying “dose-response” data** (information regarding the effect of a dose of a given substance) **in future EPA rulemaking**. Conversely, the rule **requires the EPA to deprioritize studies that use anonymized or undisclosed data and to disclose all of the studies it uses**.
- The new rule gives the **EPA administrator the ability to make exceptions** on a case-by-case basis, though the administrator must document their rationale. Certain criteria for exceptions are described in the rule (e.g. technological or other barriers that make data-sharing infeasible, older studies not conducted with data access in mind, conflicts with laws/regulations related to privacy, confidentiality or national security). However, the final criterion on the list – if “the factors used...indicate full consideration is justified” – effectively gives the EPA administrator broad discretion.
- According to EPA administrator Andrew Wheeler, the **intention is to improve transparency in rulemaking and prevent political cherry-picking of research**. However, critics – which include 55 public health, medical, academic and scientific groups (including the American Medical Association and American Association for the Advancement of Science) as well as former EPA advisors – say **the rule could prevent the EPA from using the most consequential research with the strongest scientific evidence. Many of the large epidemiological studies on populations use confidential patient data, such as health records and lifestyle information**.
- The rule comes on the heels of **other recent EPA moves under the Trump administration perceived to be political in nature, damaging its credibility**. For instance, the EPA declined to fully ban asbestos, decided not to regulate perchlorate (which has been linked to fetal/infant brain damage), rejected a prior EPA finding that the widely used pesticide chlorpyrifos stunts brain development in children, and declined to increase air-quality standards for ozone and soot. **In some cases, the EPA declined to act based on lack of access to raw data, excluding epidemiological studies and then calling findings “inconclusive.”**

- Environmental groups are drawing ties to an old Big Tobacco strategy. A memo from that era to R.J. Reynolds from an advisor suggests that **“a ‘mechanism to control EPA and other regulatory bodies’ was to insist on full transparency from scientific studies and ensure they can be reproduced.”** The desired effect was to narrow the body of evidence available to substantiate harm to public health, resulting in greater uncertainty and inaction. While the recent EPA rule should technically only impact future rulemaking, many existing regulations are renewed or reconsidered every few years, meaning longstanding rules could be impacted.
- The new rule largely puts the selection of scientific studies in the hands of the EPA administrator. **With the incoming EPA administrator already appointed, it’s not clear whether the rule will have a meaningful impact on the EPA’s use of science going forward.** The Biden administration is considered likely to overturn the rule, reverting to the prior established peer-review process for any data relied upon by the EPA.

Related Content:

- Sep 25 2020 (3 Shifts): Big 4 accounting firms release the first coordinated ESG reporting standards
- Feb 26 2020 (Brief #24): Billions in climate funding from Bezos, Microsoft, KKR & others – Why now?

3. OpenAI reveals its new DALL-E model that can generate images from text

- **OpenAI**, creator of GPT-3 (perhaps the best-known natural-language model out there), unveiled this week two new AI models that connect and translate between images and text. **The first, DALL-E** (a portmanteau of Dali and Wall-E), **can generate images from text** – for instance, drawing an image based on the text description "an armchair in the shape of an avocado." **The second, CLIP, can learn what is represented in images from captions, and use that knowledge to recognize other images** – such as a television studio or country line dancing.
- **DALL-E is a smaller 12B-parameter version of GPT-3** (which has 175B parameters) **that can draw images based on a short text phrase.** It can do so fairly effectively even in response to a complicated prompt such as “a baby daikon radish in a tutu walking a dog,” drawing multiple versions in different styles. The model’s ability to combine different ideas into plausible and even attractive (though sometimes surreal) visual results

initially surprised even its creators. (Showcased results were based on DALL-E's best 32 images according to CLIP, based on the prompt.)

- **Industry observers say DALL-E's accuracy and versatility surpass existing text-to-image generators.** Still, it has kinks to work out. **It struggles with words that have multiple meanings (e.g. glasses).** At times, its outputs can be unpredictable and fragile to minor changes in the language of the prompt. Industry watchers also suspect it is partly drawing from memory rather than generating fully novel images (something GPT-3 is notorious for).
- **CLIP** (Contrastive Language-Image Pre-training) **is an image-recognition system that can learn what an image is based on a caption (e.g. "pepper the aussie pup") rather than a labeled dataset (e.g. "dog").** The AI was pre-trained by asking it to predict which caption among a random set of 33K was the most correct for a given image, and then trained using 400M image-caption pairs found online. Because CLIP learns to connect a wide array of objects with the words used to describe them, it can generalize to identify objects outside of its training set and is less likely to be duped by subtle image alterations. However, it's less capable with specialized tasks such as satellite-imagery classification and tumor detection.
- DALL-E and CLIP are the latest releases from **OpenAI, which last year launched its first commercial product in private beta, the general-purpose natural-language OpenAI API based on GPT-3.** OpenAI also released a music-generating neural net called Jukebox, which can generate music samples with artificially generated lyrics in a variety of genres and styles. Ultimately, **OpenAI wants to create a language model with "safe artificial general intelligence" - an ambitious goal many experts believe we are far from achieving.**
- **Connecting language to visual understanding is viewed as a promising way to help AI understand our world better.** OpenAI has recognized, however, that **there are potential societal issues.** For instance, while DALL-E's output is not polished and would require editing, it could eventually have an impact on professions such as stock photographers and illustrators (whose work found online might actually be used in the training set). There is also "the potential for bias in the model outputs" - GPT-3 and CLIP have already demonstrated bias in tests. Finally, **the AI models have the potential for misuse and disinformation - which, as we know, can cause real-life harm.**

Related Content:

- Jun 19 2020 (3 Shifts): OpenAI releases an enormous general-purpose language API for commercial use
- Oct 15 2019 (Brief #3): The advance of deepfakes is spurring new countermeasures

Have a comment about this brief or a topic you'd like to see us cover? Send us a note at tips@6pages.com.