

MODERNA



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What it does

Moderna is a biotech company that develops medicines based on messenger RNA (mRNA). mRNA transfers information stored in our genes to the cellular machinery, called ribosome, that produces all the proteins required for a healthy life.

Why we own it

- The technology has transformational potential. Control the RNA transcription process and you control the body, influencing proteins to prevent and eradicate disease .
- The platform aims to address the ‘big four’ killers – autoimmune disease, cardiovascular disease, cancer, infectious disease.
- Developing treatments untreatable with existing technologies, improving disease management where treatments already exist, whilst driving drug pricing down over the long term.
- CEO Stéphane Bancel and R&D lead Stephen Hoge drive Moderna’s bold, curious and collaborative culture.

How it could be worth many times more

- Current revenue boosted by SARS-CoV-2 vaccine rollout. Current supply deals of ~300m doses at \$20 per dose and apply the average Phase III-to-approval probability in infectious disease trials of 75%, we obtain a probability adjusted revenue stream of \$4.5bn. Either the virus weakens such that vaccination only makes sense as a one-off, or it’s endemic leading to a revenue stream of booster doses at a higher price point. The latter case would see post-pandemic addressable demand of perhaps 500m annual booster doses. If Moderna supplied a quarter of this demand at 3x the pandemic pricing, an ongoing revenue stream of \$7.5bn materialises. 10x those sales, reflecting the derisking of the technology and broader applicability would put Moderna at 3x its current value.
- But if the coronavirus is validated, we can see Moderna as a notable player in the vaccine space in general. The rest of the pipeline is exciting: 12 candidates ex. Coronavirus that have entered clinical trials vs 11 for BioNTech and 3 for CureVac. The total prescription drug market is around the \$600bn mark today, not including generics and orphan drugs, so the scope for further upside is clear.

Where we might be wrong

- Biology risk – efficacy within each modality underwhelms.
- Technology risk – the platform technology does not materialise.

Short 10 Questions

CAN SALES DOUBLE IN THE NEXT FIVE YEARS? 1

COVID vaccine deposits continue to roll in.

TEN YEARS AND BEYOND? 2

Creation of an operating system for disease with the ability to tackle the ‘big four’ killers.

COMPETITIVE ADVANTAGE? 3

Focus is on the technology rather than the biology.

IS THE BUSINESS CULTURE DIFFERENT? 4

Motivated management with a long-term time horizon.

CUSTOMERS LIKE YOU? CONTRIBUTE TO SOCIETY? 5

Yes. Therapies giving hope to the previously incurable and restoring those condemned to decline.

ARE RETURNS WORTHWHILE? 6

Not yet but scale will help.

WILL THEY RISE OR FALL? 7

20% returns possible with platform success.

HOW IS CAPITAL ALLOCATED? 8

Research and manufacturing.

COULD IT BE WORTH 5x AS MUCH? 9

Transforming the drug development process will revolutionise the healthcare industry.

WHAT DOESN'T THE MARKET UNDERSTAND? 10

The pandemic represents an accelerant for the technology and is shifting the probability of success.

Risk Factors

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