

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 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

- They have >40 development programmes: several of which in Phase 3 (COVID boosters, flu, RSV and CMV) and in Phase 2 (Zika, personalized cancer vaccines and VEGF-A). The total prescription drug market is around the \$1trn mark today, so vast opportunity.
- Moderna is tackling big and important markets - HIV (\$30bn drug market), cancer (\$100bn), cardiovascular disease (+\$60bn) and autoimmune (+\$50bn), and that pipeline will expand further. The most important question is whether mRNA has the potential to be a productive and broad platform technology.
- Given increasing returns to scale, profitability ought to be high. 50% operating margins seems reasonable.

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 funded from a huge cash pile.

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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Registered Office:

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN, Scotland

Telephone +44 (0)131 275 2000 bailliegifford.com

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BGI Principal Office: Calton Square, 1 Greenside Row, Edinburgh EH1 3AN, Scotland.

Telephone: +44 (0)131 275 2000

780 Third Avenue, 43rd Floor, New York, NY 10017.

Telephone: (212) 319 4633

BGE Head Office: 4/5 School House Lane East, Dublin 2 D02 N279, Ireland.

Telephone: +35 315 294 150

BGE Frankfurt Branch: WINX Tower, Neue Mainzer Str. 6-10, 60311 Frankfurt, Germany

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