WHAT IS CLAIMED IS:

1. A control apparatus for controlling driving of a moving member including a plurality of drive axes, including a first drive axis and a second drive axis different from the first drive axis, the control apparatus comprising:

a feedback control system configured to perform feedback control to reduce a position deviation of the moving member from a target position with respect to driving of the moving member along each of the first drive axis and the second drive axis; and

a feedforward control system configured to perform feedforward control by providing the moving member with a first feedforward manipulated variable with respect to the driving of the moving member along the second drive axis to reduce an influence of the driving of the moving member along the first drive axis on the driving of the moving member along the second drive axis, in a state where the feedback control is being performed,

wherein the feedforward control system includes a calculator configured to:

obtain data by measuring a position deviation of the moving member along the first drive axis while driving the moving member along the first drive axis and the second drive axis in a state where only the feedback control is being performed for the moving member;

obtain a third input/output response in the first drive axis of the moving member to the inputting of a manipulated variable with respect to the driving along the first drive axis;

calculate a second feedforward manipulated variable to be provided to the moving member with respect to the driving along the first drive axis based on the obtained data and the third input/output response;

obtain a first input/output response in the second drive axis of the moving member to inputting of a manipulated variable with respect to the driving along the first drive axis;

obtain a second input/output response in the second drive axis of the moving member to inputting of a manipulated variable with respect to the driving along the second drive axis; and

calculate the first feedforward manipulated variable based on the second feedforward manipulated variable, the first input/output response, and the second input/output response.

2. The apparatus according to claim 1, wherein the feedforward control system includes a storage unit configured to store the first feedforward manipulated variable calculated by the calculator, and provides, when driving the moving member along the first drive axis and the second drive axis, the moving member with the first feedforward manipulated variable stored in the storage unit with respect to the driving of the moving member along the second drive axis.

3. The apparatus according to claim 1, wherein each of the first input/output response and the second input/output response includes one of an impulse response or a step response.

4. The apparatus according to claim 1, wherein the moving member includes a substrate stage configured to hold a substrate onto which a pattern of a reticle is transferred.

5. An exposure apparatus for exposing a substrate, the exposure apparatus comprising:

a substrate stage configured to hold the substrate and including a plurality of drive axis, including a first drive axis and a second drive axis different from the first drive axis; and

a control apparatus configured to control driving of the substrate stage, and comprising:

a feedback control system configured to perform feedback control to reduce a position deviation of the substrate stage from a target position with respect to driving of the substrate stage along each of the first drive axis and the second drive axis; and

a feedforward control system configured to perform feedforward control by providing the substrate stage with a first feedforward manipulated variable with respect to the driving of the substrate stage along the second drive axis to reduce an influence of the driving of the substrate stage along the first drive axis on the driving of the substrate stage along the second drive axis, in a state where the feedback control is being performed,

wherein the feedforward control system includes a calculator configured to:

obtain data by measuring a position deviation of the substrate stage along

the first drive axis and the second drive axis in a state where only the feedback control is being performed for the substrate stage;

obtain a third input/output response in the first drive axis of the substrate stage to the inputting of a manipulated variable with respect to the driving along the first drive axis;

calculate a second feedforward manipulated variable to be provided to the substrate stage with respect to the driving along the first drive axis based on the obtained data and the third input/output response;

obtain a first input/output response in the second drive axis of the substrate stage to inputting of a manipulated variable with respect to the driving along the first drive axis;

obtain a second input/output response in the second drive axis of the substrate stage to inputting of a manipulated variable with respect to the driving along the second drive axis; and

calculate the first feedforward manipulated variable based on the second feedforward manipulated variable, the first input/output response, and the second input/output response.

6. A method of manufacturing an article, the method comprising:

exposing a substrate using an exposure apparatus defined in claim 5;

developing the exposed substrate; and

manufacturing the article from the developed substrate.