



FIGURE 4.66 The datapath with controls to handle exceptions. The key additions include a new input with the value 8000 0180_{hex} in the multiplexor that supplies the new PC value; a Cause register to record the cause of the exception; and an Exception PC register to save the address of the instruction that caused the exception. The 8000 0180_{hex} input to the multiplexor is the initial address to begin fetching instructions in the event of an exception. Although not shown, the ALU overflow signal is an input to the control unit.