PKI and its associated hardware, software, policies, and people can provide greater security assurances than simpler means of authenticating identity, such as passwords. In pursuit of these benefits, 20 of the 24 agencies reported that they are undertaking a total of 89 PKI initiatives. The 89 initiatives are at various stages of development, and collectively they represent a significant investment, estimated at about $1 billion. In addition, the governmentwide FBCA and ACES programs continue to promote the adoption and implementation of PKI, but these programs have seen mixed progress and results. The level of participation in the FBCA, which provides a means to link independent agency PKIs into a broader network, is the same as in 2001—four agencies have been certified as meeting technical and security requirements to interconnect through the network. Additional organizations are planning to participate in the future, including four federal agencies and some nonfederal organizations, such as the state of Illinois, the Canadian government, and educational consortiums. Similarly, the ACES program, which offers agencies various PKI services through a General Services Administration (GSA) contract, has seen lower than expected participation by federal agencies. GSA plans to revise the pricing structure associated with the ACES program to encourage participation.

PKI implementation continues to pose major challenges for agencies, which are shown in the table. Many of these challenges are similar to those identified in GAO's 2001 report. In that report, GAO recommended that the Office of Management and Budget (OMB), working with other key federal entities, take action to address these challenges, including establishing a governmentwide framework of policy and technical guidance and a program plan for the federal PKI. GAO also recommended that OMB take steps to ensure that agencies adhere to federal PKI guidance. OMB has not yet fully addressed the recommendations related to the construction of a PKI policy framework, but it issued a policy memorandum in July 2003 that lays out steps for consolidating investments related to authentication and identity management processes across government.