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We analyse three models to determine the conditions under which reserve requirements are used as a part of an optimal monetary policy framework in an inflation targeting regime. In all cases the Central Bank (CB) minimizes an objective function that depends on deviations of inflation from its target, the output gap and deviations of reserve requirements from its optimal long term level. In a closed economy model we find that optimal monetary policy implies setting reserve requirements at their long term level, while adjusting the policy interest rate to face macroeconomic shocks. Reserve requirements are included in an optimal monetary policy response in an open economy model with the same CB objective function and in a closed economy model in which the CB objective function includes financial stability. The relevance, magnitude and direction of the movements of reserve requirements depend on the parameters of the economy and the shocks that affect it.