In this study, price discovery and granger causality relationship in BIST 30 spot and futures markets and also volatility spillover between these markets are examined using intraday 1 minute data for January 2, 2010 – May 18, 2012 period. According to Johansen cointegration test result it is concluded that there is a long-term relationship between index futures and spot markets and according to VECM model result the evidence is found that index futures market contributes more to price discovery and futures prices lead spot prices, and also according to VEC granger causality-block exogeneity test result although there is a two way causality between markets, the causality is much more stronger from index futures to spot market is evidenced. In the context of volatility spillover between index futures and spot markets, VECM-GARCH (1,1)-BEKK model is applied, and the evidence is found that although there is a bi-directional volatility spillover between index futures and spot markets, the spillover of index futures market shocks and volatility to spot market volatility is much more pronounced. Hence, the findings for both price discovery and volatility spillover indicate that the information is primarily reflected in the futures market and index futures market is more informationally efficient than spot market.