Footnotes

1. The major ones are dry bulk, wet (liquid) bulk, general cargo, and liquid gas. Cargo carrying/ocean shipping has distinct segments (see Kavussanos 2010, among others). This study in its analysis concentrates in the dry bulk segment. Specifically, it focuses on the Capesize, Panamax and Supramax sectors, as they are the major and most prominent sub-sectors of dry bulk, and most importantly, for the freight rates of which and the commodities carried, freight and commodity derivatives prices are available.
2. For instance, Prokopczuk (2011) employs alternative affine continuous-time models of the spot price dynamics in order to derive closed-form valuations for freight futures contracts.
3. Kavussanos and Visvikis (2004), show that freight derivatives markets are broadly unbiased and that the freight derivatives market informationally leads the underlying (physical) spot market for freight rates. As such, freight derivatives can be utilized as price discovery vehicles for spot freight markets. Participants can have a better assessment of risk management, chartering and budget planning decisions by utilizing the information available in the freight derivatives market as a price discovery vehicle. Wheat, corn, soybean and coal futures, which correspond to the underlying commodities transported in the shipping routes of the dry bulk freight derivatives contracts, for which data are available, are also shown in the literature to fulfill their price discovery role in relation to their underlying spot markets; see for instance, McKenzie and Holt (2002) for US corn futures and Yang and Leatham (1999) for US wheat commodity futures markets, among others.
4. Goss and Avsar (1999) argue that a major difference between non-storable and storable commodities (when both spot and derivatives markets exist) is that the magnitude of the forward premium (contango) in the case of storable commodities is limited by the “marginal net cost of storage”, whereas for non-storable commodities no restriction exists. Keynes (1930) mentions that in the case of backwardation, no such restriction exists, both for storable and non-storable commodities. Tomek and Gray (1970) argue that futures prices of storable commodities provide more reliable forecasts (and thus can assimilate more information) than those for non-storable commodities, as the futures prices for non-storable commodities serve as a source of price stability, while the futures prices for storable commodities serve as a measure of inventory allocation.