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# Fractal concatenation applied to the interpolation of the price in the London Stock Exchange

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In this article we presented an analysis of the concatenation fractal with GIS, in schemes of first fractals with local geography applied to the limit of quotation of the actions of the stock market of London and applied to the determinants of cost and rank according to the attraction level that exists in the localities of chaotic noise determined by fractal concatenation in the short term.

#### First fractal, attractors of level, bifurcation fractal.

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#### Introduction

The complex dynamics of the London Capital Markets group is characterized by anomalous fluctuations, known as universal empirical evidence, their distribution is fat-tailed and volatility of profitability fits all long-term autocorrelations. This is a great start to get detect and catastrophic possibilities, such as bubbles and crashes on the trading activity of shares, rare events that can not be recognized with a normal distribution, so it is important to model fractal concatenation with each price the specific stock market indices. Given the Capital Markets have fractal behavior, it is possible to know their variations with information share trading day periods and identify outliers in both survey periods down as the high precision with better decision-making with respect to other indexes in Europe and the world.

An analytical tool in financial economics is the Fractal Approach because it highlights the inherent properties of selfsimilarity and self-affinity representing the processes of return and volatility (in terms of cost and margin) in the Capital Markets in London.

Thus, improving the results obtained with the assumption of such distributions abnormality.

#### **Modeling prices**

Considering the price parameters Xn + 1 (Ex Ante) and another parameter Yn + 1 (Ex Post), do the concatenation fractal process in a context of GIS'F delimitándonos to such expressions:

$$X_{n+1} = (1-\Omega) f\lambda(X_n) + \frac{\Omega}{4} [f\lambda(X_n) + f\lambda(Y_n)]$$

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$$Y_{n+1} = (1-\Omega) f\lambda(Y_n) + \frac{\Omega}{4} [f\lambda(Y_n) + f\lambda(Z_n)]\varsigma$$
  
$$Z_{n+1} = (1-\Omega) f\lambda(Z_n) + \frac{\Omega}{4} [f\lambda(Z_n) + f\lambda(X_n)]$$
(1)

Regarding the price invariant under a possible transformation Xn, Yn and Zn, we have that a diagonal on the market is a trend that will be symmetrical in its singularity at cost and margin [RE Maria: 2011], so it will be necessary to have another diagonal passing through the transformation of operators in the market prices and be close to the plane resulting in X, Y, Z and  $\vartheta$ .

$$MP_{\frac{1}{1}}^{-1}: (x,y) \rightarrow (f(x,y),g(x,y))$$

$$MP_{\frac{1}{2}}^{-1}: (x,y) \rightarrow (f(x,y),-g(x,y))$$

$$MP_{\frac{1}{3}}^{-1}: (x,y) \rightarrow (-f(x,y),-g(x,y))$$

$$MP_{\frac{1}{4}}^{-1}: (x,y) \rightarrow (-f(x,y),g(x,y))$$
(2)

Points delimiting the London market broker (see Appendix 1: Quotes London stock market), we obtain the following values of the cost and margin, with the following notation X and YR points. [Abraham, L. Gardini, and C. Mira: 1997], with GIS'F 4 $\lambda$  4 stations (North, South, East and West) and NO negativity 1 –  $\Omega$ , to the  $\frac{\Omega}{4-\Omega}$ , respect to the present and expected price.

For the Ex Ante price, we get:

$$\int \frac{\Omega}{4\lambda} \left\{ 4 - \left(1 + \frac{1}{1 - \Omega}\right) X - \left(1 - \frac{1}{1 - \Omega}\right) y \right\}$$

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For the Ex Ante Price, we get: g(x,y)=

$$\sqrt{\frac{\Omega}{4\lambda}} \Big\{ 4 - \left(1 - \frac{1}{1 - \Omega}\right) X - \left(1 + \frac{1}{1 - \Omega}\right) y \Big\}$$

The interpolation of these prices will be given in the limit of linearity NO  $4 - \Omega$ , for all X and Y.

$$\pounds = \{(x,y)|y=1 + \frac{\Omega}{4-\Omega}(x-1)(x \le 1, y \le 1)(3)$$

Markets respond to a pattern of hidden, irrational, compulsive, seemingly random and unpredictable behavior and therefore disconcerting but, despite all these repellent characteristics, respond to a geometric structure and therefore are sufficiently organized, it is vital for all interested in the capital markets [M. F. Barnsley: 2006]. Our focus will then be to describe and apply various models, while comparisons to establish the relevant securities markets that are similar in terms of the number of stations Market activity, as in the case of our index of London (TSE) - Time Stock Exchange.

Cost Range and	Capital	Markets	in	London
Cost Range and	Capitai	Markets	111	Longon.

Volumen de venta	6.8980733
Postura de venta	3.619002
Volumen de compra	7.6596823
Postura de compra	3.9969111
Volumen operado	6.7809385
Máximo Ex Post	3.0897609
Mínimo Ex Post	4.0528564
Máximo Ex Ante	0.2368859
Mínimo Ex Post	2.0937977
Acciones en	8.2341117
circulación	
Table 1	

Own calculations based on data from http://www.londonstockexchangegroup.com.

In Table 1 we obtained all the logarithmic values of the study variables for modeling, we collect data from 247 stations in

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the London market and typify according to their marketability index in (TSE), so we define the coordinates of the maps that we will thicken fractal shape according to [J. Kigami: 2001].

Set to the margin:

$$X \pounds = \left( -1 + \sqrt{\frac{\left(1 - 4\Omega + 8\lambda(1 - \Omega)\right)^2}{4\lambda(1 - \Omega)}} \right)$$
(4)

Set to the Cost:

$$Y \pounds = \left( -1 - \sqrt{\frac{\left(1 - 4\Omega + 8\lambda(1 - \Omega)\right)^2}{4\lambda(1 - \Omega)}} \right)$$
(5)

Each of the curves or diagonal lines to be formed on the fractal mapping satellite have thickened regions X0 and Y0, and will grasp more accurately price any run through the inflection points with determinants of Jacobians that auxiliaran join us each forks price [R. L. Ruiz and DF Prunaret, Int J] curves in dependence on Julia'S SET as  $360^{\circ}$  in geographic axes.

z0 = 0	z4=26
z1 = 1 = 2 + 1	
z2 = 3	
z3 = 5	

Forming the matrix of rational iterations NO whole of MP (market price), [K. Falconer 1997] we obtain the following in conjunction with the golden mean:

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$$MP = \begin{vmatrix} Z0 & 0 & -1 & 2 \\ Z1 & -1 & 1 & 4 \\ Z2 & 0 & -1 & 8 \\ Z3 & -1 & 3 & 16 \\ Z4 & & & & (6) \end{vmatrix} > 0.618$$

And arrogates the sub-areas of cost: z0 = 0, z1 = i, z2 = -1 + i, -i = z3, z4 = -1 + I, -I = z5, z6 = -1 + i margin ..... and we obtain z0 = 0, z1 = 2i, 2i + z2 = -4, z3 = 12 - 14i, z4 = 52 - 334i, [H. Furstenberg and H. Kesten: 1960] as the distribution of fat tails leptukorticas (relatively long tails) for price changes (and not fractional Gaussian distribution).

$$MP_{\frac{1}{4}}^{-1} = p_{\frac{1}{4}}^{-1}(MP)U(p_{\frac{1}{4}}^{-1}(MP))$$
  
$$\frac{-4}{41} = p_{\frac{1}{1}}^{-1}(MP_{\frac{1}{4}}^{-1})$$
  
$$MP_{\frac{1}{4}}^{-1}MP_{\frac{4}{44}}^{-4} = p_{\frac{1}{4}}^{-1}(MP_{\frac{1}{4}}^{-1})$$
(7)

Starting thickening, locked in the price in  $X, Y_{(n+1)}$ :

$$\begin{split} X_{n+1} &= (1 - \Omega) f\lambda_1(X_n) + \frac{\Omega}{4} [f\lambda_1(X_n) + f\lambda_2(Y_n)] \\ Y_{n+1} &= (1 - \Omega) f\lambda_2(Y_n) + \frac{\Omega}{4} [f\lambda_1(X_n) + f\lambda_2(Y_n)] \end{split}$$

Given the Price function,  $f(p) = \sum_{i=1}^{n\infty} \frac{MP_{1i}}{p_{1i-z}} + \sum_{n=1}^{n\infty} \frac{MP'_{1}}{p'_{n-z}}$ , we get  $\mu$  in the range of Ex Ante and Ex Post:

$$\mu = \sum_{n=1}^{n\infty} \frac{MP'n}{p'\frac{k}{n}+1}$$
(8)

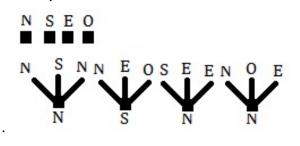
Resorting to the market with respect to k (range)  $|MP|_{\overline{k}}^{1}|$ , in the price of each share will get  $MP=p_{K(1+\frac{\mu k}{pk})}$ , logarithms and using the force

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of attraction G fractal  $|MP|_{\overline{k}}^{1} = |p_{K}|_{\overline{k}}^{1} G_{\overline{4} |\overline{k}|}^{\Omega} \log |1 + \frac{\mu k}{p_{K}}|$ , then if  $MP \ge p$ , NO marketability is  $\frac{1}{p} \le \frac{1}{p_{1}}$ .

Representation of the space G 360°



**Graphic 1** 

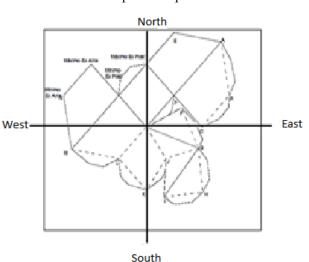
Matrix form we get:

Ì

$$MP = \begin{vmatrix} N & 2 & -1 & 1 \\ S & 2 & 3 & 3 \\ E & 2 & 4 & 4 \\ O & 3 & 4 & 4 \\ & & & & \end{vmatrix} MP = \begin{vmatrix} 1 \\ 4 \end{vmatrix}$$
(9)

Let's choose some geometric body to swell our prices in Table 1, within the London stock market, to measure the distance between the price range, we use the idea of  $\varepsilon$ -thickening of a market trend, so  $\varepsilon$  is the collection of all prices within a trend of  $\varepsilon$  capital Markets.

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Thickening of prices contained in a pyramid for a simplex-d4 square.

#### **Graphic 2**

Variations of each segment will have dimensions for each specific geometric SET  $f\lambda_1(X_n)+f\lambda_2(Y_n)+f\lambda_3(X_n)+f\lambda_4(Y_n)$ , the following geometric thickening as [K. Falconer 1997]:

Chain price thickening	3
------------------------	---

N	(Q & A & Ñ & P)1/2 (B & F & D & E & O & N)3/4
S	(H & I & K)1/2 (C & G & J & L & M)3/4
Е	(A & B & C & G & H)1/2 (Q & D & F & I & J)3/4
0	(M & N & Ñ)1/2 (E & K & L & O & P)3/4

Table 2

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Considering the topology of fractal body get the

 $\begin{array}{l} & run\{(1/2)^{(1/2)}(1/2)_{(1/2)}(1/2)_{(1/2)}(1/2)_{(1/2)}(1/2)_{(1/2)}(1/2)_{(1/2)}(1/2)_{(1/2)}(1/2)^{(1/2)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}\} \\ & (3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}(3/4)_{(3/4)}\} \stackrel{<}{\to} \epsilon = 18 \ \alpha = 0.000000072583281, \text{ which tells us that the London market is empirical evidence to be fractal.} \end{array}$ 

In the study period 2010-2011, assuming that  $\alpha$  and  $\vartheta$  are compact subsets of the general trend of the 247 stations. Now if  $\alpha$  is the square of the price range, and d is the length of projection of the market: and

$$Pf = \frac{\log \alpha 1}{\overline{d \, 3}} (90,180,360), \frac{\ln \alpha 1}{\overline{d \, 1}}$$

$$Pf = \frac{\log \alpha 2}{\overline{d \, 1}} (180,270), \frac{\ln \alpha 2}{\overline{d \, 3}}$$

$$Pf = \frac{\log \alpha 3}{\overline{d \, 2}} (360, 270, 90), \frac{\ln \alpha 3}{\overline{d \, 2}}$$

$$Pf = \frac{\log \alpha 4}{\overline{d \, 2}} (270,360,180), \frac{\ln \alpha 4}{\overline{d \, 2}}$$
(10)

Prices dependencies that are broken can be obtained from MP= $\alpha_0\alpha_1...\alpha_k...\epsilon$  p  $\frac{\infty}{\Omega}$  with the following dimensions:

D-Vertical: North-South

$$(\Omega \frac{\alpha}{1}, ..., \Omega \frac{\alpha}{p} = \lim_{k \to \infty} \mu^{\alpha 0}, ..., \mu^{\alpha k - 1} (\Omega \frac{0}{1}, ..., \frac{0}{p})$$

D-Horizontal: East-West

$$(k\frac{\alpha}{1}, ..., k\frac{\alpha}{p} = \lim_{k \to \infty} f^{\alpha 0}, ..., f^{\alpha k-1}(K\frac{0}{1}, ..., K\frac{0}{p})$$

Now the construction of the fractal matrix [K. Kaneko: 1986], with geographic pricing iteration becomes:

$$p = \begin{vmatrix} N & 1 & 2 & 1 \\ S & 1 & 3 & 4 \\ E & 2 & 3 & 3 \\ O & 2 & 2 & 3 \end{vmatrix} MP \longleftrightarrow (p) = \begin{vmatrix} N & (\frac{1}{3})\Omega & 0 & 0 \\ S & \Omega(\frac{1}{2}) & \frac{1}{3} & \frac{1}{2} \\ E & 0 & (\frac{1}{3}) & 0 \\ O & 0 & \frac{1}{2} & \frac{1}{3} \\ & & & & & \end{vmatrix}$$
(11)

#### **Price interpolation**

\_\_\_\_

When this concept is transferred to fractals prices and a geographic basis, their error terms may also be interrelated (p1 ... pk - 1)(MP), then find ourselves with the concept of spatial autocorrelation or spatial correlation [R. S. Strichartz, 2006], to discuss this correlation in space instead of time f  $\frac{\Omega(\emptyset)}{k_1} \circ f \frac{\Omega}{k_2}(p1)$ , so it is important to distinguish correlation and autocorrelation and serial correlation lags ask a series fractal, herself, behind a number of time units (u1, u2, ..., u10 and u2, u3, ..., u11) in the London market will be 1 year (2010-2011), and raises the fractal correlation lag correlation between two different series (one Ex Ante and Ex Post another) - (u1, u2, ..., u10 & v1, v2, ..., v10) in reverse:

$$MP \subset \mathbb{R}^{n}, \ \Omega \in k.$$

$$MP(\emptyset) = MP^{0}, \qquad MP \quad k_{1}...k_{m} = f \quad \frac{\Omega}{k_{1}}(\emptyset) \circ f \quad \frac{\Omega}{k_{2}}(p1) \quad \circ ... \circ f \quad \frac{\Omega}{k_{m}}(p1 \dots pk - 1)(MP)$$

$$MP^{k} = \cup p1 \dots pk \qquad (12)$$

After demonstrating the iterations of fractal concatenations must consider all prices from  $\pounds^{\alpha 0}$  to  $\pounds^{\alpha k-1}$ , in all the cases  $\lambda$  will be the axis of curvature of all critical points that are outside the market trend and interpolated prices  $f\lambda_1(Xn)$  to  $f\lambda_n(Yn)$ :

$$\vartheta \supset \vartheta k1 \supset \cdots \supset \vartheta k1 \dots km \supset \cdots, \vartheta \supset \vartheta k1$$
$$\supset \cdots \supset \vartheta k1 \dots km \supset \cdots$$

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$$\begin{split} \vartheta \mathbf{k} \cap \vartheta \mathbf{p} &= \emptyset \\ |\mathbf{k}| &= |\mathbf{p}|, \, \mathbf{k} \neq \, \mathbf{p} \\ \vartheta \supset \vartheta \mathbf{1} \supset \cdots \supset \vartheta \mathbf{k} \supset \cdots, \, \vartheta \supset \vartheta - \, \mathbf{1} \supset \cdots \\ &\supset \vartheta - \mathbf{k} \supset \end{split}$$

All logs must be narrow and strictly convex are increasingly turning point in the bulge |k| = |p|, showing correlation of prices in the fractal empty [E. Ott, 2002], which represent geometrically with:

$$MP^{k} = \prod_{k \ge 1} \vartheta -_{k} (\Omega)$$
(13)

Fractal indexing of the pivoting series at prices is:

$$A = \begin{bmatrix} K\alpha(1) & \cdots & \vartheta\alpha(1,1)\vartheta\alpha(1,\vartheta) \\ \vdots & \ddots & \vdots \\ K\alpha(4) & \cdots & \vartheta\alpha(\vartheta,1)\vartheta\alpha(\vartheta,k) \end{bmatrix}$$
(14)

For all price pairs (x, y), (x ', y'). In general, the contractions can reduce the distance between prices for different amounts (Ln modeling and / or Log), depending on the position of the ranges [M. F. Barnsley, Hutchinson and J. E. Ö. Stenflo: 2005]. A similarity reduces all distances by the same number, r < 1.

$$\begin{aligned} &R_{\min}(\alpha) = \inf(\lambda) \sum_{m=1}^{K\lambda} (r_{\overline{k}}^{\Omega})^{\alpha} , R_{\max} \\ &(\alpha) \sup(\lambda) \sum_{m=1}^{K\lambda} (r_{\overline{k}}^{\Omega})^{\alpha} \end{aligned}$$

In R<sup>2</sup>, [R. Abraham, L. Gardini, and C. Mira: 1997], to the space  $[f\lambda(Y_n)+f\lambda(Z_n):$ 

$$X^{\alpha} = (K_{\underline{1}}^{\Omega}, \dots, K_{\underline{\alpha}}^{\alpha}) = (K_{\underline{1}}, \dots, K_{\alpha})$$

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In R<sup>3</sup> concatenated space R Price:

$$\mathbf{Y}^{\alpha} = (\mathbf{p}_{\overline{1}}^{\Omega}, \dots, \mathbf{p}_{\overline{\Omega}}^{\alpha}) = (\mathbf{p}_{1}, \dots, \mathbf{p}_{\alpha})$$

Whereas according bifurcations [Hutchinson 1981] narrowing of prices for the reasons

nes  $K^{\alpha 0(\alpha)} \cdot \ldots \cdot K^{\alpha p}$  the space will be:

$$\lim_{k \to \infty} \qquad \mu_{k}^{1} \log \| K^{\alpha 0(\alpha)} \cdot \ldots \cdot K^{\alpha p-1}(\alpha)$$
$$\|=\mu(\alpha) \qquad (15)$$

Overall fractal Concatenation

$$\begin{split} f^{\alpha}(k1,\ldots,K_m) = \bigcup_{m=1}^{Mk\alpha(1)} & f\frac{1\alpha}{m}(M_{k\alpha(1,m)}),\ldots \\ , & \bigcup_{m=1}^{Mk\alpha(p)} & f\frac{1\alpha}{m}(M_{k\alpha(p,m)}) \text{ y para el Ex Ante (k} \\ \frac{\Omega}{1},\ldots,k\,\frac{\Omega}{1}) = \lim_{k\to\infty} & \mu^{\alpha 0},\ldots, & \mu^{\alpha k-1}(\Omega\,\frac{0}{1},\ldots, \\ & \Omega\,\frac{0}{p}) \text{ , mientras que para el Ex Post (p} \\ \frac{\Omega}{1},\ldots,k\,\frac{\Omega}{1}) = \lim_{m\to\infty} & \mu^{\alpha 0},\ldots, & \mu^{\alpha k-1}(\Omega\,\frac{0}{1},\ldots, \\ & \Omega\,\frac{0}{p}). \end{split}$$

#### Conclusions

The London market for all price pairs (x, y), (x', y') using the transformation T  $(x, y) = (x r \cdot r \cdot y)$  as its contraction factor r. An affinity reduced distances by different amounts in different directions ie (N, S, E and O). If all transformations of an IFS are twitching, and then iterating the IFS is guaranteed to converge [H. Kitajima, T. Yoshinaga, K. Aihara, and H. Kawakami 2003] in a unique way for the best price in the Short-Term Market via GIS'F.

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Having the median price to the border between Max & Min; gives rise to other limits symmetrically above and below the average, generally expressed as a common multiple in its fractal Border Geospatial concatenation. Position in the market with index 0.37 was determined, the maximum market closed 2.85 respect to 1.95, thus the difference in 0.9 and 2.85-1.95 are accepted with fractal statistics for golden mean is greater than 0.618 (expected) and less of a Gauss 1. Finalmente only 3 companies (AUTONOMY CORP, BABCOCK & BROWN BEAR **STEARNS** LTD PRTNSHPS PUBLIC PRIVATE EQUITY) are outside the parameters enrollment marketability retardoon-1. Having 0 as the boundary between Rates Max & Min, symmetrically above and below 0 was the basis for concatenation MP

$$(\alpha) = \sum \{p[\vartheta]\}: m \le p \in \Omega_k, |p| = p(\alpha)\}.$$

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#### Annex A

#### **London Capital Markets**

EMISORA	V.V.	P.V	V.C	P.C	v.a.	Ma.E.	MLE	Ma.E	MLE	AC
SUNFRASTRUCTURE LTD	_	-	_	-	-	-	-	-	-	_
ABSOLUTE RETURN TRUST	-	-	—	-	-	-	•	-	-	—
ACENCIA DEBT STRATEGIES	—	=	_	-	—	=	=	=	=	—
ADDAX PETROLEUM CORP	_	-		-	-	-	-	-	-	_
AEA TECHNOLOGY	_	-	_	-	—	-	-	-	-	_
AFI DEVELOPMENT PLC	-	-	_	-	-	-	-	-	-	_
ALIZYME	_	-	_	-	-	-	-	-	-	_
ALLIANCE BANK JSC	-	-	_	-	-	-	-	-	-	_
ALPHAMERIC	_	-	_	-	-	-	-	-	-	_
AQUA RESOURCES FUND	-	-	_	-	-	-	-	-	-	_
ARAWAK ENERGY LTD ARICOM	_	-	_	-	-	-	-	-	-	_
	_	-	_	-	_	_	-	-	-	_
ARK THERAPEUTICS GROUP ASEANA PROPERTIES LTD	_	_	_	_	_	_	-	-	-	
ASHMOREGLOBAL	=	Ξ.	=	÷.,	Ξ.	=	-	-	-	=
OPPORTUNITIES LTD AUTONOMY CORP	_	_		_		_	-	_		
BABCOCK & BROAN PUBLIC PRENSHPS LED	-	-	—	-	-	-	-	-	-	—
BABCOCK INTERNATIONAL GROUP	-	-	—	-	-	-	-	-	-	—
EAE SYSTEMS	—	-	—	-	—	-	-	-	-	—
BARCLAYS	—	-	—	-	-	-	-	-	-	—
EARONSMEAD VCT 3	—	-	—	-	—	-	-	-	-	—
EARONSMEAD VCT 4	—	-	—	-	-	-	-	-	-	—
BEAR STEARNS PRIVATE EQUITY	—	-	—	-	-	-	-	-	-	—
BEAZLEY PLC	—	-	-	-	-	-	-	-	-	_
BEN BAILEY	—	-	—	-	—	-	-	-	-	—
BH GLOBAL LTD	—	-	_	-	-	-	-	-	-	_
BH MACRO LTD	—	-	_	-	—	-	-	-	-	—
BLACKROCKABSOLUTE RETURN STRATEGIE	-	-	-	-	-	-	-	-	-	-
BLUECREST ALLELUE FUND LTD BOUSSARD & GAVAUDAN							_	-	-	
HOLDING BRADFORD & BINGLEY	_	_	_	_	_	_	_	-	-	_
BRAEMAR SHIPPING			_		_					
SERVICES PLC BRAMDEAN ALTERNATIVES	_	-	_	_	_	_	-	-	-	_
LTD								_	_	
BRAMMER	_	-	-	-	-	-	-	-	-	
BREW/IN DOLPHIN HLDGS	—	—	—	-	—	-	-	-	-	
CADBURY PLC	_	-	-	-	-	-	-	-	-	_

# Article

ADOGAN PETROLEUM

# **OPTIMIZATION**

CADOGAN PETROLEUM	—	-	_	-	—	-	-	-	-	_
CAPITAGROUP	-	-	-	-	-	-	-	-	-	_
CAREUK	—	-	—	-	—	—	-	-	-	—
CASTLE ALTERNATIVE INVESTIAG	_	-	_	-	_	-	-	-	-	_
CATTLES	_	-	—	-	—	-	-	-	-	—
CAZENOVE ABSOLUTE	-	-	-	-	-	-	-	-	-	_
EQUITY LTD CENTRAL RAND GOLD LTD	_	_	_	_	_	_	_	-	-	_
CENTRICA	_	-	_	-	_	_	_	-	-	
CERES AGRICULTURAL	_	-	_	-	_	_	-	-	-	_
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PLC	_	_	_	_	_	_	_	-		
CHEMRING GROUP	_	-	_	-	—	-	-	-	-	-
CHRYSALIS GROUP PLC	—	-	—	-	—	-	-	-	-	-
CINE/VORLOG/ROUP CITY MERCHANTS HIGH	-	-	-	-	_	-	-	-	-	_
VIELD TRUST CLOSE ENTERPRISE VCT	_	-	—	-	—	-	-	-	-	-
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COMMERCIAL BANKOF	_	-	-	-	—	-	-	-	-	-
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DEXION TRADING LTD DIAMOND CIRCLE CAPITAL	_	-	=	-	_	=	-	-	-	_
PLC										_
DIMENSION DATA HEDGS PLC	_	-	_	-	—	-	-	-	-	—
DOMINO'S PEZA UK& IRL	—	-	-	-	—	-	-	-	-	—
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IMPAX ENVIRONMENTAL Markets plo	—	-	-	-	—	-	-	-	-	—
IMPERIAL ENERGY CORP	—	-	-	—	—	-	—	-	-	—
IMPERIAL TOBACCO GROUP	—	-	-	-	—	-	—	-	-	_
INDOCHINA CAPITAL VIETNAM HLDGB LTD	—	-	-	-	—	-	—	-	-	—
INFRABTRUCTURE INDIA	—	-	-	-	-	-	-	-	-	-
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COMMERCIAL BEA PORT				_		_		_		
OCTOPUS PROTECTED VCT 2 PLC	_	_	_	_	_	_	_	-	-	_
OCTOPUS PROTECTED VCT PLC	—	-	—	-	—	-	—	-	-	—
OCTOPUS TITAN VCT 1 PLC	_	-	-	-	-	-	_	-	-	-
OCTOPUS TITAN VCT 2 PLC	—	-	—	-	—	-	—	-	-	—
OCTOPUS TITAN VCT 2 PLC	—	-	-	-	—	-	-	-	-	—
OGK 2	_	—	-	-	_	-	—	-	-	_
PACE MICRO TECHNOLOGY	_	-	-	-	_	-	_	-	-	_
PALM HILLS Developments bae	_	-	-	-		-	_	-	-	-
PARAGON GROUP OF	-	-	-	-	-	-	-	-	-	-
PARTNERS GROUP GLOBAL	—	-	-	—	—	-	—	-	-	-
OPPORTUNITIES PHARMSTANDARD OJSC		-	-	_	_	-	_	-	-	-
PHAUNOB TIMBER FUND	_	-	-	-	_	-	-	-	-	_
LTD PLASMON		_	_	-		_	_	-	-	-
POWERBHAREB GLOBAL		_	_	_		-		-	-	_
FUNDS IRELAND		_	_			_	_		_	
PREMIER RENEWABLE ENERGY FOLITO		_				-		-	-	
ENERGY FOLTO PRIMARY HEALTH PROPERTIES	_	—	-	-	—	-	—	-	-	—
PRINCESS PRIVATE EQUITY	_	-	-		-	-	-	-	-	-
HLDGB PRINCIPLE CARITAL	_	-	-		_	-	_	-	-	_
INVESTMENT TRUST		_								

# Article

PRODESSEINVESTMENT PROGRESSIVE DIGITAL

# **OPTIMIZATION**

	473
<b>ECORFAN</b>	Journal-Mexico

April 2012 Vol.3 No.6 464-473

PROGRESSIVE DIGITAL MEDIA GROUP PLC	—	-	-	-	—	-	—	-	-	—
PBOURCE BTRUCTURED DEBT LTD	-	-	-	-	-	-	-	-	-	_
PUMA VOT V PLC	—	-	-	—	—	-	—	-	-	-
QUEENCO LEBURE INTERNATIONAL LTD QUORUM OIL & GAB	_	=	-	_	_	-	_	-	-	_
TECHNOLOGY FUND LD REAHLDOB PLC	_	_	_	_	_	-		-	_	
RANDGOLD REBOURCEB	—	-	_	-	—	-	_	-	-	-
RECKITT BENCKIBER	—	-	—	-	—	-	—	-	-	-
GROUP PLC RECORD PLC	—	-	-	-	-	-	_	-	-	_
REGUS PLC	-	-	—	-	-	-	—	-	-	_
RENOVO GROUP REO BECURITEB LTD		_	_			_		-	_	_
ROTINTO	_	_	_	_	_	_	_	-	_	_
ROYAL & BUN ALLIANCE INBURANCE OR	—	-	-	-	-	-	-	-	-	—
ROYAL BANK OF BOOTLAND GROUP PLC	—	-	-	-	—	-	—	-	-	_
RUGBY ESTATES INVESTMENT TRUST PLC BAFESTORE HLDGS PLC	_	_	_	_	_	_	_	-	-	_
BALAMANDER ENERGY PLC	—	-	-	-	-	-	—	-	-	_
BCARBOROUGH BUILDING BOCIETY	—	-	-	-	—	-	—	-	-	_
BOI ENTERTAINMENT GROUP	-	-	-	-	-	•	-	-	-	_
BDL	_	-	-	-	-	-	_	-	-	
BEPURA PLC BHAFTEBBURY PLC	=	=	=	=	=	=	=	-	-	
BHANKE GROUP	_	_	_	_	_	-	_	-	-	
BHIRE LTD	—	-	-	-	—	-	—	-	-	_
BIG BINCLAIR PHARMA	=	=	=	=	=	-	=	-	-	_
BINCLAIR PHARMA BKYEPHARMA	_	_	_	_	_	-	_	-	-	
BMURRT KAPPA PLC	—	-	-	—	—	-	—	-	-	_
BPA ETF PLC	—	-	—	-	—	-	—	-	-	_
BPEEDY HIRE BRCE PLC	_	-	_	_	_	-	_	-	-	_
BPORTECH	_	_	_	_	_	_	_	-	-	_
BPORTS DIRECT INTL PLC	-	-	-	-	—	-	—	-	-	_
BTANDARD CHARTERED	_	_	-	_	_	-	_	-	-	_
BTEPBTONE ABA BTOBART GROUP LTD	Ξ.	Ξ.	=	Ξ.	=	Ξ.	Ξ.	-	-	
BUPEROLASS HLDOS PLC	-	-	-	-	-	-	-	-	-	_
SYMPHONY INTERNATIONAL HEDGS LTD	(20-22	-16276	161,266	1204	(24124)	222	16006.72	w	1627	2004/6/3
SYNERGY HEALTH PLC	122-621	20664	675.666	<10.00	(1/(2/2	2647	16176.22	611	1246	175,26640
TAPESTRY INVESTMENT CO PCC	12662226	/16022	277.666	162.74	1107667	27.72	62246	120	157,27	2772-124
TARSUS GROUP PLC	$(2\pi t\Sigma)$	16267	636666	2000	7646410	1666	\$2424	1.66	40420	16276-00
TELECITY GROUP	(372/6)	~247	637.666	264667	TIGGET:	52 <b>6</b> 2	100.42	ш	2:662	conveasa
THAMES RIVER MULTH HEDGE PCC	1266216	479.26	16-166	ната	тисти	56. <b>2</b> 7	50625	6.16	271/6	:W204/2
THIRD POINT OFFSHORE INVESTORS LTD	6270245	-16656	WI 166	106126	(12644-)	66.56	57420	646	22724	шил
THOMSON REUTERS PLC	16502566	162626	1266266	121666	129-262	7024	6474	477	~73	10-2467
TPS VCT PLC	11/16/160	and the	102000	110072	12820	72.8	7574	622	34.10	*******
TP70 VCT PLC	11,227,166	701226	10000	106662	1202245	7270	7/1.64	6.71	SYT62	107/06:58
TUITRAVEL PLC										_
UK COMMERCIAL	11266250	1606607	752666	~1722	eccent.	Ψ.2	THEFE	647	(162)	
PROPERTY TRUST LTD	12122/40	166-2	11:000	40131	16667262	71.2 6272	4645	1.17	4460.02	SCETCER
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD	12122/60 12/97/27/	166-2 12(+7/)	~15666 766566	4641.02 -47.25.02	16667262 16607247	7(2) 6272 622	46645 67024	1.17 642-	446002	KORTORIO KARANERO
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC	12122240 12247.077 11267.072	166-2 126-776 126666-	115466 766466 277466	40433) 472502 4760	10207202 10207207 102172780	17.2 6272 62/ 11212	46445 672,64 676,72	1.17 640 1646	446002 406200 67664	5067060 5002160 5416767
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC URALKALI JSC	42422/60 4224/2017 4126/372 46224716	106-2 127-777 120062- 1126026	115466 766466 277466 225466	4044.42 47.25-02 4760 5664.44	16267262 16267267 16372780 6666812	17.2 6272 627 627 1924: 12675	460.40 672.64 676.72 666.64	1.17 642 1626 642	116222 126222 67644 222227	50670600 50674600 50427670 566024602
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC URALKALI JSC UTV MEDIA PLC	12122/63 125-7.277 11567.172 16.2/1.716 16.76-367	1664-2 1204777 12006644 1126026 1671121	115266 Teosco 277266 227366 Trosso	4044.42 47.25.32 4762 5664.44 56257.25	16667262 16607247 16472760 6066812 6067226	17.2 6272 627 1124: 12675 16667	-6635 6726- 67672 67672 6666-	1.17 642- 1644 644 644	446002 406200 64664 00027 02027	5067080 50024600 54427670 56022682 56026620
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTALKALI JSC UTV MEDIA PLC VECTURA GROUP	12122/63 120/1277 11/07/172 1620/1716 1676/167 1266-777	16642 1284777 1266664 1126276 1671121 166177	11566 76666 27766 22466 74666	40131 41202 41202 41202 41202 41203 41203 41203	16667362 16607667 166772760 6066812 6067226 6067226	W.2 6272 627 1121: 12675 16667 15676	-16.45 072.0- 076.72 006.0- 576.76 076.45	1.17 660 1666 642 626 672	4160.02 4068.00 67667 000.27 028.67 -60.26	SCATAGO SOLVAGO SOLVAGO SOLVAGO SOLVAGO SOLVAGO
PROPERTY TRUST LTD UNITED DUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTVALKALI JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV	12/122/62 122/7/277 112/6/372 16/26/376 16/76/376 12266/377 12266/36	16642 1224727 1266664 1126026 1671121 166172 11402271	115466 Tecsee 27566 22566 Tecsee 12566 16566	-64132 -72622 -762 -566-74 -522726 -62677 -6266	Челетлен Челетлен Челетлен Челетлен Берерде Соблас Сабала	<ul> <li>W.2</li> <li>6272</li> <li>627</li> <li>11241</li> <li>12675</li> <li>16667</li> <li>16626</li> <li>16425</li> </ul>	- 46.45 071,52 076,72 076,72 076,72 076,72 076,75 077,45 077,45	1.17 642 1626 642 626 672 646	4460022 4068002 64664 00028 02028 46026 64774	50673600 50774600 504.07000 50024600 50024600 50024600
PROPERTY TRUST LTD UNITED DUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTARLKALI JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VTB BANK(JSC)	12422/60 122/1277 1120/172 162/1716 1626/171 1226/171 1226/171 1226/271	16642 1204727 1206662 1426026 1674121 1664122 14402274 1206560	110200 Tecano 277200 222300 Troano 12000 12000 12000 10000	<ul> <li>&lt;64132</li> <li>&lt;12022</li> <li>&lt;162</li> <li>&lt;162</li> <li>&lt;162</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> </ul>	46467262 46467266 4647266 6666812 6666812 6666812 666676 767666 767266	<ul> <li>Tr.2</li> <li>62.72</li> <li>62.7</li> <li>112.1:</li> <li>126.75</li> <li>126.67</li> <li>126.76</li> <li>126.25</li> <li>126.25</li> <li>126.25</li> </ul>	-6545 07522 07672 0666- 57676 0745 67745 07756	1.17 642- 16426 644 645 645 646 644	446222 456222 66664 55527 55527 55527 55527 55526 65724 46528	5007000 5077000 5410700 5602460 5602460 5602460 570660 570660
PROPERTY TRUST LTD UNITED DUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTARLKALI JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VTE BANK(JSC) WAGON	12/122/62 122/7/277 112/6/372 16/26/376 16/76/376 12266/377 12266/36	16642 1224727 1266664 1126026 1671121 166172 11402271	115466 Tecsee 27566 22566 Tecsee 12566 16566	-64132 -72622 -762 -566-74 -522726 -62677 -6266	46267262 46267262 46372760 66372760 66372760 66372260 76376676 7637269 7637269	<ul> <li>W.2</li> <li>6272</li> <li>627</li> <li>11241</li> <li>12675</li> <li>16667</li> <li>16626</li> <li>16425</li> </ul>	- 46.45 071,52 076,72 076,72 076,72 076,72 076,75 077,45 077,45	1.17 642 1626 642 626 672 646	446222 456225 64664 55527 52607 46526 64724 46428	5007000 5077000 5410700 5602460 5602460 5602460 570660 570660
PROPERTY TRUST LTD UNITED DUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTARLKALI JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VTE BANK(JSC) 'WAGON WELLSTREAM HLDGS PLC	12422/60 122/1277 1120/172 162/1716 1626/171 1226/171 1226/171 1226/271	16642 1204727 1206662 1426026 1674121 1664122 14402274 1206560	110000 Tecano 271000 221000 Troano 120000 100000 100000	<ul> <li>&lt;64132</li> <li>&lt;12022</li> <li>&lt;162</li> <li>&lt;162</li> <li>&lt;162</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> <li>&lt;16267</li> </ul>	46467262 46467266 4647266 6666812 6666812 6666812 666676 767666 767266	<ul> <li>Tr.2</li> <li>62.72</li> <li>62.7</li> <li>112.1:</li> <li>126.75</li> <li>126.67</li> <li>126.76</li> <li>126.25</li> <li>126.25</li> <li>126.25</li> </ul>	-6545 07522 07672 0666- 57676 0745 67745 07756	1.17 642- 16426 644 645 645 646 644	446222 456222 66664 55527 55527 55527 55527 55526 65724 46528	50074000 50074000 54407070 56024002 56024002 54004000 54004000 53006000
PROPERTY TRUST LTD UNITED DUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTARLKALI JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VTE BANK(JSC) WAGON	12422760 12247277 14264727 1626474 1626476 1226426 1226626 1226626 1226626	1064-2 12847247 1286266 14286266 1674424 1664622 14646224 12866667	115266 765266 277266 227366 745666 145666 145666 145666	<ul> <li>4413.2</li> <li>4726.22</li> <li>4762</li> <li>5664.24</li> <li>5624.26</li> <li>4626.71</li> <li>4626.71</li> <li>5626.45</li> <li>5646.45</li> </ul>	46267262 46267262 46372760 66372760 66372760 66372260 76376676 7637269 7637269	<ul> <li>TY 2</li> <li>6272</li> <li>627</li> <li>1124:</li> <li>12675</li> <li>12675</li> <li>12676</li> <li>12665</li> <li>12665</li> </ul>	-6535 0725- 07672 07672 07675 07675 07735 07745 07656 06635	1.47 642- 1642- 644- 642- 642- 644- 644- 1.42	446222 456225 64664 55527 52607 46526 64724 46428	5007-000 507-000 544.070-00 5602-002 5602-002 547.0600 547.0600 532.0600 522.0600
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC URAL KALL JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VIMETCO NV VIMETCO NV VITE BANK(JSC) WAGON WELLSTREAM HLDGS PLC WESTBURY PROPERTY FUNCTHES VICHFORD PLC	12122/60 1224/277 1126/277 1126/277 1126/277 1226/277 1226/277 1226/277 1226/277 1226/276 122766/27	1064-2 1204727 1200664 1126026 1671121 1664122 114-2271 1200665 12006657 14-21067	-115266 Tecsee 275266 752666 752666 752666 752666 752666	<ul> <li>4413.2</li> <li>4724.22</li> <li>4762</li> <li>4624.74</li> <li>6224.26</li> <li>4626.77</li> <li>4626.76</li> <li>6267.93</li> <li>6466.76</li> <li>646.76</li> </ul>	16267262 16267267 16272787 62662812 62662812 6266286 7266276 7266276 7266276 7266276	W.2           6272           627           627           627           1241           12675           16627           16627           16627           16627           16627           16627           16627           16627           16627           16627           16627	-6030 670672 670672 66064 67030 67030 67030 71096 66030 66030	1.47 642 1646 644 626 646 647 1.42	416222 426222 6664 20027 22667 6774 26672 26672 26925	50072000 50724000 5012400 5022400 5022400 5022600 5022600 50226000 50226000 50226000
PROPERTY TRUST LTD UNITED DUSINESS MEDIA LTD UNITED UTILITIES GROUP PLC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VTE BANK(JSC) WAGON WELLSTREAM HLDGS PLC WESTBURY PROPERTY FUNCTITIE) FUNCTITIE)	12422540 122540277 142640277 162540276 162540276 1626405 1626766 1626766 1626766	1664-2 1224-747 1266664 1426026 1674424 1664074 1440224 1206667 14406667 16466666	-115666 Teases 275666 Teases -26666 -46666 -42666 -42666 -42666 -42666	<ul> <li>4641.4.2</li> <li>47.22.4.2</li> <li>47.62</li> <li>47.62</li> <li>462.6.7</li> <l< td=""><td>16667162 16667167 1667167 1667276 606812 6067286 1676276 167676 167676 1676276 166616 166616 166616 166616</td><td>97.2 6272 627 11205 1205 10020 10120 10120 10120 10120 10120 10120 10120 10120</td><td><ul> <li>465.45</li> <li>671.67</li> <li>671.67</li> <li>671.67</li> <li>671.65</li> <li>671.65</li> <li>671.76</li> <li>666.76</li> <li>667.76</li> <li>667.76</li> <li>776.46</li> </ul></td><td>1.47 646 1646 649 626 649 646 649 142 147 647</td><td>416022 40620 6666 20027 76026 6474 46628 46642 56426 52606</td><td></td></l<></ul>	16667162 16667167 1667167 1667276 606812 6067286 1676276 167676 167676 1676276 166616 166616 166616 166616	97.2 6272 627 11205 1205 10020 10120 10120 10120 10120 10120 10120 10120 10120	<ul> <li>465.45</li> <li>671.67</li> <li>671.67</li> <li>671.67</li> <li>671.65</li> <li>671.65</li> <li>671.76</li> <li>666.76</li> <li>667.76</li> <li>667.76</li> <li>776.46</li> </ul>	1.47 646 1646 649 626 649 646 649 142 147 647	416022 40620 6666 20027 76026 6474 46628 46642 56426 52606	
PROPERTY TRUST LTD           UNITED BUSINESS MEDIA           LTD           UNITED UTILITIES GROUP           PLC           URALKALI JSC           UTV MEDIA PLC           VECTURA GROUP           VIMETCO NV           VTB BANK(JSC)           WARDON           WELLSTREAM HLDGS PLC           MECHDRUP PROPERTY FUNCTITIE]           WICCHORD PLC           XPP PLC           XCHANGING PLC	12122462 12244274 12244274 14264372 16224374 16264374 12266264 1227666 1227666 1227666 123766375 1432562 14376315	1664 2 1284 727 1266 644 1426 726 1674 121 1664 72 144 727 1 1426 646 1426 646 1426 646 1666 646 1666 646 1666 646	115466 Teasea 275666 225666 756666 156666 142666 255666 255666	-644.4.2 -772-C2 -7762 -7762 -6267-74 -6267-74 -6267-74 -6267-74 -6677-26	16267262 16267267 16272760 16272760 16272260 1727269 727269 7267276 7267276 7267276 7267276 7267276 726726	197.2 6272 627 192.12 12675 16667 16667 16642 16	-16535 07120 07072 07072 07072 07072 07072 07072 07075 07076 07076 07076 07056 07056	1.47 666 664 664 664 664 664 646 646 1.42 1.42 644 644 644	446022 40620 64664 00027 12607 46076 64774 46028 46672 54026 54026 54026	
PROPERTY TRUST LTD UNITED BUSINESS MEDIA LTD UTU UTU DUTLITIES GROUP PLC URALKALI JSC UTV MEDIA PLC VECTURA GROUP VIMETCO NV VTB EANK(JSC) VMAGON WELLSTREAM HLDGS PLC WELSTREAM HLDGS PLC WELSTREAM HLDGS PLC SCHANGING PLC SCHANGING PLC SP POWER LTD	12/12/2010 12/12/2017 14/201772 16/201772 16/201772 16/201772 12/2000 12/2000 12/2000 12/2000 12/2000 14/22/202 15/10/2010	166-2 127777 1267777 126665- 1677124 1667777 1677224 166667 166667 166667 166667 166667 166667 166667 166667 166667 166627 166627	-172666 Teccece 2772666 Teccece 725666 745666 745666 745666 745666 745666 745666 745666	-644.42 -712-02 -712-0 -712-0 -722-02 -722-02 -722-02 -742-0 -722-02 -72-02 -72-02 -72-02 -72-02 -72-02 -72-02 -72-02 -72-02 -72-02 -7	46607202 46607202 46672760 60672760 60672760 60676 707261 707261 7260200 7267260 7267260 7267260 7267260	19.2 6272 627 12675 12675 12675 16667 16125 16125 1675 1677 1677 16267	- 4635 07520 07672 0666 07676 06676 07740 06764 06666 07744 06666 07744 06666 07744 06666 06754 06662 06662 06662 06662	1.47 6424 1644 644 645 647 647 147 647 147 647 126	446022 406220 6664 00027 12667 46026 64774 46622 94426 54626 54626 54626 54622 54626	
PROPERTY TRUST LTD           UNITED BUSINESS MEDIA           LTD           UNITED UTILITIES GROUP           PLC           URALKALI JSC           UTV MEDIA PLC           VECTURA GROUP           VIMETCO NV           VTB BANK(JSC)           WARDON           WELLSTREAM HLDGS PLC           MECHDRUP PROPERTY FUNCTITIE]           WICCHORD PLC           XPP PLC           XCHANGING PLC	12/122562 12/57/279 14/267/372 16/267/374 16/267/374 12/266/269 12/266/26 12/266/26 12/266/26 15/36/276 15/36/26 15/276/26 15/276/26 15/276/26	16642 1224707 1226664 11266667 1126667 11266667 11266667 11266667 11266667 11266667 11266667 11266667	-174646 746646 277466 225466 746666 746666 746666 276666 276666 276666	-6443.41 -778-22 -778-2 -626-24 -626-24 -626-26 -726-26 -726-726-26 -7	46607262 46607262 46672780 6060812 60072780 600768 700264 700264 700262 700262	1922 6272 627 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242 19242	-46.45 676.72 676.72 666.64 677.45 667.76 667.76 667.76 667.76 667.76 667.76 667.26 667.26 667.26 667.26 667.26 667.26 667.26 667.26 667.26 667.26 675.76 755.75	1.47 666 666 667 667 667 647 1.47 647 647 647 1.26	446002 406200 67667 20027 200027 20027 20027 20027 20027 20027 20027 20027 20027 20027 200	

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