

Morning Email: TERM TEDS & Dirty TEDS

Table of Contents

| | |
|-----|---------------------------------------|
| Pg1 | Overview and hedges |
| Pg2 | Dirty TED: ZT vs Eurodollar Contracts |
| Pg3 | Dirty TED: ZF vs Eurodollar Contracts |
| Pg4 | Dirty TED: ZN vs Eurodollar Contracts |
| Pg5 | TERM TED: 2y vs Eurodollar Contracts |
| Pg6 | TERM TED: 5y vs Eurodollar Contracts |
| Pg7 | TERM TED: 10y vs Eurodollar Contracts |

Rotate Me

| F.I. Futures and Cash | | | |
|-----------------------|-----------------|------------|----------------|
| | Last Decimal | Last 32 | Last Yield* |
| ZT | 102.6781 | 102.217 | 4.525 |
| ZF | 106.4375 | 106.140 | 4.382 |
| ZN | 109.4063 | 109.130 | 4.408 |
| Blank | | | |
| 2y | 100.178 | 100.0570 | 4.525 |
| 5y | 100.155 | 100.0496 | 4.391 |
| 10y | 101.150 | 101.0480 | 4.437 |

*Futures use CTD for Last Yield
 **Mduration = Modified Macaulay Duration

| Eurodollars (ED) | | | | | | |
|------------------|---------------|-------------------|-------------------|---------------------|-------|---------------|
| | Last Price | Last Imp Yield | Days til Expr. | Fraction of year | Month | |
| F.EDAZ06 | 94.658 | 5.343 | 14 | 0.038 | DEC | White Pack |
| F.EDAH07 | 94.880 | 5.120 | 105 | 0.287 | MAR | |
| F.EDAM07 | 95.165 | 4.835 | 196 | 0.536 | JUN | |
| F.EDAU07 | 95.355 | 4.645 | 287 | 0.786 | SEP | Red Pack |
| F.EDAZ07 | 95.465 | 4.535 | 378 | 1.035 | DEC | |
| F.EDAH08 | 95.525 | 4.475 | 469 | 1.284 | MAR | |
| F.EDAM08 | 95.535 | 4.465 | 560 | 1.534 | JUN | Green Pack |
| F.EDAU08 | 95.530 | 4.470 | 651 | 1.783 | SEP | |
| F.EDAZ08 | 95.500 | 4.500 | 742 | 2.032 | DEC | |
| F.EDAH09 | 95.470 | 4.530 | 833 | 2.282 | MAR | Green Pack |
| F.EDAM09 | 95.430 | 4.570 | 924 | 2.531 | JUN | |
| F.EDAU09 | 95.395 | 4.605 | 1015 | 2.780 | SEP | |

How many ways can you hedge the TED? Let me count...there's lots and lots, like:

- 1 Regression
- 2 Engineered
- 3 Strip with and without Stubs
- 4 Convexity Bias
- 5 Weighted
- 6 Unweighted
and more...

Most of us are interested in the *unweighted hedge* which is simply a curve trade hedge. There are so many ways to hedge the TED trade that I can't possibly list them all.

If you email me and ask for a specific hedge, I'll get it to you.

igoulding@ghco.com

Eurodollar Color Codes for Individual Year Strips:

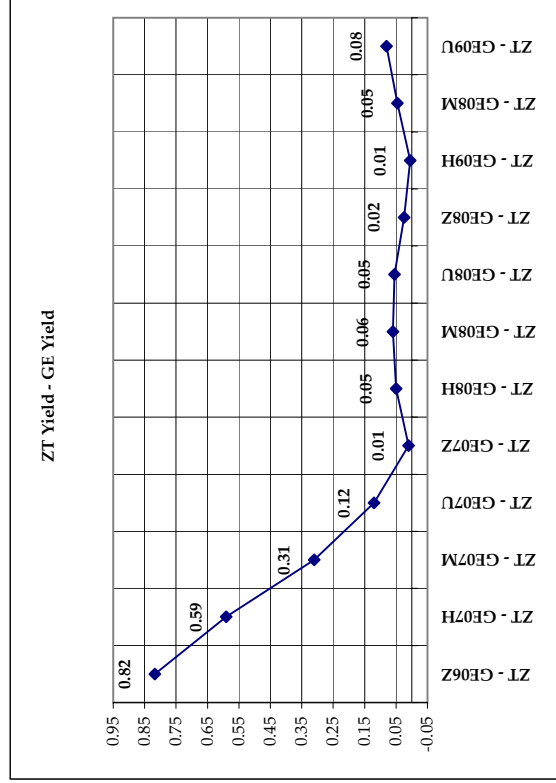
| Color | Year | Contracts |
|--------|-------|-----------|
| White | One | 1 – 4 |
| Red | Two | 5 – 8 |
| Green | Three | 9 – 12 |
| Blue | Four | 13 – 16 |
| Gold | Five | 17 – 20 |
| Purple | Six | 21 – 24 |
| Orange | Seven | 25 – 28 |
| Pink | Eight | 29 – 32 |
| Silver | Nine | 33 – 36 |
| Copper | Ten | 37 – 40 |

Dirty TED: ZT vs Eurodollar Contracts

| | Spread Price | Spread Yield | Spread Name |
|----------|--------------|--------------|-------------|
| F.EDAZ06 | 8.021 | 0.82 | ZT - GE06Z |
| F.EDAH07 | 7.798 | 0.60 | ZT - GE07H |
| F.EDAM07 | 7.513 | 0.31 | ZT - GE07M |
| F.EDAU07 | 7.323 | 0.12 | ZT - GE07U |
| F.EDAZ07 | 7.213 | 0.01 | ZT - GE07Z |
| F.EDAH08 | 7.153 | 0.05 | ZT - GE08H |
| F.EDAM08 | 7.143 | 0.06 | ZT - GE08M |
| F.EDAU08 | 7.148 | 0.05 | ZT - GE08U |
| F.EDAZ08 | 7.178 | 0.02 | ZT - GE08Z |
| F.EDAH09 | 7.208 | 0.01 | ZT - GE09H |
| F.EDAM09 | 7.248 | 0.05 | ZT - GE09M |
| F.EDAU09 | 7.283 | 0.08 | ZT - GE09U |

Price = Outright Decimal Price - Euro Contract Price

Yield = ABS(Proxy Yield - Implied Euro Contract yield)



| GE Duration as Fraction of year | Duration | ZT Duration | Spread Duration |
|---------------------------------|----------|-------------|-----------------|
| F.EDAZ06 | 0.038 | 1.90 | 1.86 |
| F.EDAH07 | 0.287 | 1.90 | 1.61 |
| F.EDAM07 | 0.536 | 1.90 | 1.37 |
| F.EDAU07 | 0.786 | 1.90 | 1.12 |
| F.EDAZ07 | 1.035 | 1.90 | 0.87 |
| F.EDAH08 | 1.284 | 1.90 | 0.62 |
| F.EDAM08 | 1.534 | 1.90 | 0.37 |
| F.EDAU08 | 1.783 | 1.90 | 0.12 |
| F.EDAZ08 | 2.032 | 1.90 | (0.13) |
| F.EDAH09 | 2.282 | 1.90 | (0.38) |
| F.EDAM09 | 2.531 | 1.90 | (0.63) |
| F.EDAU09 | 2.780 | 1.90 | (0.88) |

The farther away from 0 the spread duration is the riskier the trade.

Dirty TED: ZF vs Eurodollar Contracts

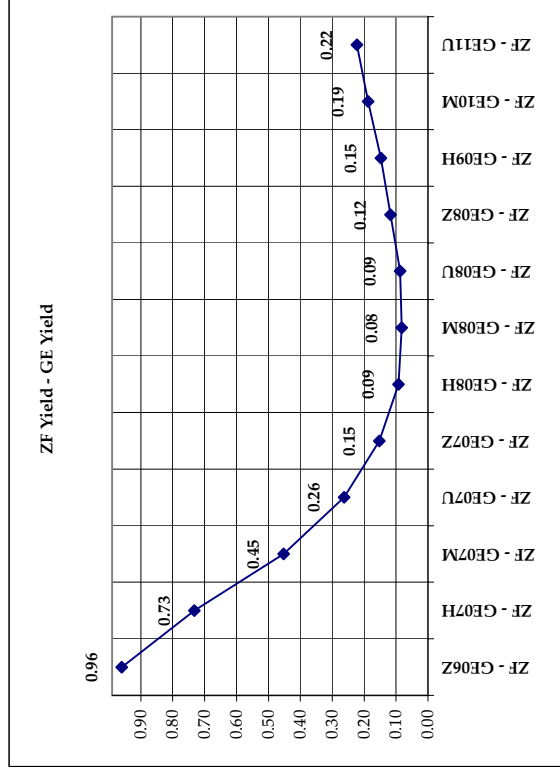
| | | ZF | |
|--------------|--------------|-------------|-------------|
| Spread Price | Spread Yield | Spread Name | Spread Name |
| F.EDAZ06 | 11.78 | 0.96 | ZF - GE06Z |
| F.EDAH07 | 11.56 | 0.74 | ZF - GE07H |
| F.EDAM07 | 11.27 | 0.45 | ZF - GE07M |
| F.EDAU07 | 11.08 | 0.26 | ZF - GE07U |
| F.EDAZ07 | 10.97 | 0.15 | ZF - GE07Z |
| F.EDAH08 | 10.91 | 0.09 | ZF - GE08H |
| F.EDAM08 | 10.90 | 0.08 | ZF - GE08M |
| F.EDAU08 | 10.91 | 0.09 | ZF - GE08U |
| F.EDAZ08 | 10.94 | 0.12 | ZF - GE08Z |
| F.EDAH09 | 10.97 | 0.15 | ZF - GE09H |
| F.EDAM09 | 11.01 | 0.19 | ZF - GE10M |
| F.EDAU09 | 11.04 | 0.22 | ZF - GE11U |

Price = Outright Decimal Price - Euro Contract Price

Yield = ABS(Proxy Yield - Implied Euro Contract yield)

| GE Duration as Fraction of year | | ZF | |
|---------------------------------|----------|----------|--------|
| of year | Duration | Duration | Spread |
| F.EDAZ06 | 0.038 | 4.00 | 3.96 |
| F.EDAH07 | 0.287 | 4.00 | 3.71 |
| F.EDAM07 | 0.536 | 4.00 | 3.46 |
| F.EDAU07 | 0.786 | 4.00 | 3.21 |
| F.EDAZ07 | 1.035 | 4.00 | 2.96 |
| F.EDAH08 | 1.284 | 4.00 | 2.71 |
| F.EDAM08 | 1.534 | 4.00 | 2.46 |
| F.EDAU08 | 1.783 | 4.00 | 2.22 |
| F.EDAZ08 | 2.032 | 4.00 | 1.97 |
| F.EDAH09 | 2.282 | 4.00 | 1.72 |
| F.EDAM09 | 2.531 | 4.00 | 1.47 |
| F.EDAU09 | 2.780 | 4.00 | 1.22 |

The farther away from 0 the spread duration is the riskier the trade.

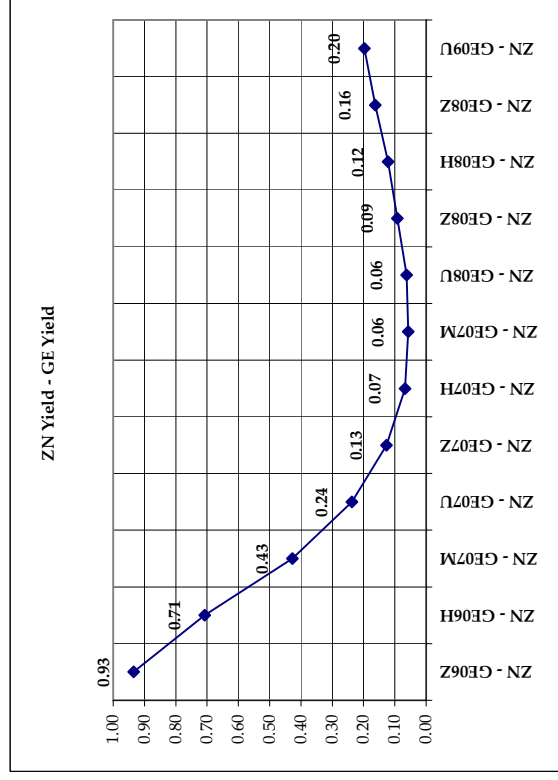


Dirty TED: ZN vs Eurodollar Contracts

| Spread | | ZN | |
|----------|-------|--------|------------|
| Price | Yield | Spread | Name |
| F.EDAZ06 | 14.75 | 0.93 | ZN - GE06Z |
| F.EDAH07 | 14.53 | 0.71 | ZN - GE06H |
| F.EDAM07 | 14.24 | 0.43 | ZN - GE07M |
| F.EDAU07 | 14.05 | 0.24 | ZN - GE07U |
| F.EDAZ07 | 13.94 | 0.13 | ZN - GE07Z |
| F.EDAH08 | 13.88 | 0.07 | ZN - GE07H |
| F.EDAM08 | 13.87 | 0.06 | ZN - GE07M |
| F.EDAU08 | 13.88 | 0.06 | ZN - GE08U |
| F.EDAZ08 | 13.91 | 0.09 | ZN - GE08Z |
| F.EDAH09 | 13.94 | 0.12 | ZN - GE08H |
| F.EDAM09 | 13.98 | 0.16 | ZN - GE08M |
| F.EDAU09 | 14.01 | 0.20 | ZN - GE09U |

Price = Outright Decimal Price - Euro Contract Price

Yield = ABS(Proxy Yield - Implied Euro Contract yield)



| GE Duration as Fraction of year | ZN | |
|---------------------------------|----------|--------|
| | Duration | Spread |
| F.EDAZ06 | 0.038 | 5.90 |
| F.EDAH07 | 0.287 | 5.65 |
| F.EDAM07 | 0.536 | 5.40 |
| F.EDAU07 | 0.786 | 5.15 |
| F.EDAZ07 | 1.035 | 4.90 |
| F.EDAH08 | 1.284 | 4.65 |
| F.EDAM08 | 1.534 | 4.40 |
| F.EDAU08 | 1.783 | 4.15 |
| F.EDAZ08 | 2.032 | 3.90 |
| F.EDAH09 | 2.282 | 3.66 |
| F.EDAM09 | 2.531 | 3.41 |
| F.EDAU09 | 2.780 | 3.16 |

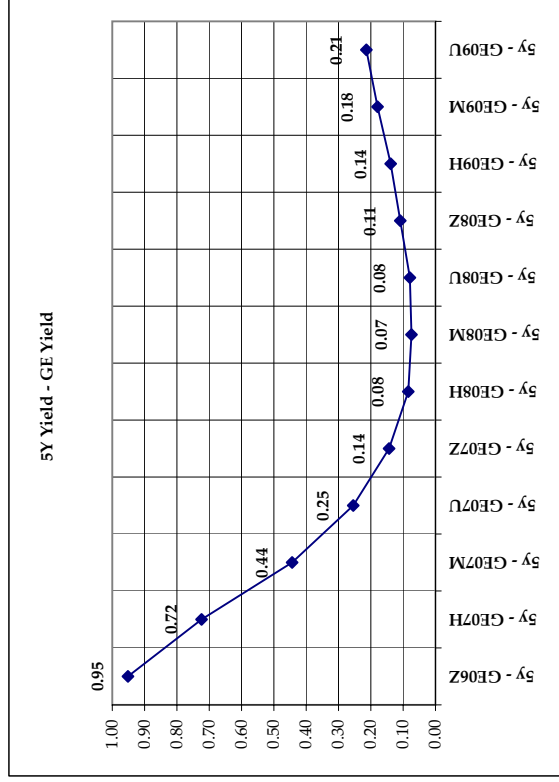
The farther away from 0 the spread duration is the riskier the trade.

TERM TED: 5y vs Eurodollar Contracts

| | Spread Price | 5y Spread Yield | Spread Name |
|----------|--------------|-----------------|-------------|
| F.EDAZ06 | 5.50 | 0.95 | 5y - GE06Z |
| F.EDAH07 | 5.28 | 0.73 | 5y - GE07H |
| F.EDAM07 | 4.99 | 0.44 | 5y - GE07M |
| F.EDAU07 | 4.80 | 0.25 | 5y - GE07U |
| F.EDAZ07 | 4.69 | 0.14 | 5y - GE07Z |
| F.EDAH08 | 4.63 | 0.08 | 5y - GE08H |
| F.EDAM08 | 4.62 | 0.07 | 5y - GE08M |
| F.EDAU08 | 4.63 | 0.08 | 5y - GE08U |
| F.EDAZ08 | 4.66 | 0.11 | 5y - GE08Z |
| F.EDAH09 | 4.69 | 0.14 | 5y - GE09H |
| F.EDAM09 | 4.72 | 0.18 | 5y - GE09M |
| F.EDAU09 | 4.76 | 0.21 | 5y - GE09U |

Price = Outright Decimal Price - Euro Contract Price

Yield = ABS(Cash Yield - Implied Euro Contract yield)



| GE Duration as Fraction of year | 5Y Duration | Spread Duration | | |
|---------------------------------|-------------|-----------------|------|------------|
| F.EDAZ06 | 0.038 | 4.00 | 3.96 | 5y - GE06Z |
| F.EDAH07 | 0.287 | 4.00 | 3.71 | 5y - GE07H |
| F.EDAM07 | 0.536 | 4.00 | 3.46 | 5y - GE07M |
| F.EDAU07 | 0.786 | 4.00 | 3.21 | 5y - GE07U |
| F.EDAZ07 | 1.035 | 4.00 | 2.96 | 5y - GE07Z |
| F.EDAH08 | 1.284 | 4.00 | 2.71 | 5y - GE08H |
| F.EDAM08 | 1.534 | 4.00 | 2.46 | 5y - GE08M |
| F.EDAU08 | 1.783 | 4.00 | 2.22 | 5y - GE08U |
| F.EDAZ08 | 2.032 | 4.00 | 1.97 | 5y - GE08Z |
| F.EDAH09 | 2.282 | 4.00 | 1.72 | 5y - GE09H |
| F.EDAM09 | 2.531 | 4.00 | 1.47 | 5y - GE09M |
| F.EDAU09 | 2.780 | 4.00 | 1.22 | 5y - GE09U |

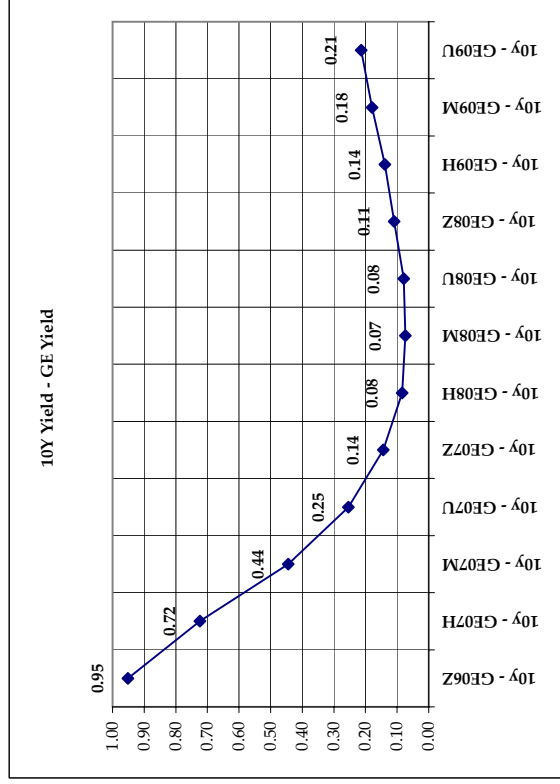
The farther away from 0 the spread duration is the riskier the trade.

TERM TED: 10y vs Eurodollar Contracts

| | | 10y | |
|----------|--------|--------|-------------|
| Spread | Spread | Spread | Spread |
| Price | Yield | Yield | Name |
| F.EDAZ06 | 5.50 | 0.95 | 10y - GE06Z |
| F.EDAH07 | 5.28 | 0.73 | 10y - GE07H |
| F.EDAM07 | 4.99 | 0.44 | 10y - GE07M |
| F.EDAU07 | 4.80 | 0.25 | 10y - GE07U |
| F.EDAZ07 | 4.69 | 0.14 | 10y - GE07Z |
| F.EDAH08 | 4.63 | 0.08 | 10y - GE08H |
| F.EDAM08 | 4.62 | 0.07 | 10y - GE08M |
| F.EDAU08 | 4.63 | 0.08 | 10y - GE08U |
| F.EDAZ08 | 4.66 | 0.11 | 10y - GE08Z |
| F.EDAH09 | 4.69 | 0.14 | 10y - GE09H |
| F.EDAM09 | 4.72 | 0.18 | 10y - GE09M |
| F.EDAU09 | 4.76 | 0.21 | 10y - GE09U |

Price = Outright Decimal Price - Euro Contract Price

Yield = ABS(Cash Yield - Implied Euro Contract yield)



| GE Duration as | | 10Y | |
|----------------|----------|----------|---------|
| Fraction | Duration | Duration | Spread |
| of year | of year | of year | of year |
| F.EDAZ06 | 0.038 | 7.90 | 7.87 |
| F.EDAH07 | 0.287 | 7.90 | 7.62 |
| F.EDAM07 | 0.536 | 7.90 | 7.37 |
| F.EDAU07 | 0.786 | 7.90 | 7.12 |
| F.EDAZ07 | 1.035 | 7.90 | 6.87 |
| F.EDAH08 | 1.284 | 7.90 | 6.62 |
| F.EDAM08 | 1.534 | 7.90 | 6.37 |
| F.EDAU08 | 1.783 | 7.90 | 6.12 |
| F.EDAZ08 | 2.032 | 7.90 | 5.87 |
| F.EDAH09 | 2.282 | 7.90 | 5.62 |
| F.EDAM09 | 2.531 | 7.90 | 5.37 |
| F.EDAU09 | 2.780 | 7.90 | 5.12 |

The farther away from 0 the spread duration is the riskier the trade.