PSEDYS | TECHNICAL REFERENCE MANUAL V3.0

CMF — Chaikin Money Flow

Technical Reference Manual v1.0

PSEDYS | Complete Edition
SUM(MFV)/SUM(Vol) · Oscillator −1/+1 · Accumulation/Distribution · Zero Cross · CMF vs A/D vs OBV · MTF · Bot vs TradingView

CONTENTS

1. What is CMF? Concept and Origin
2. Calculation Formula — Complete
3. Interpretation and Levels
4. Lag and Warm-up
5. Trading Signals
6. CMF vs A/D Line vs OBV — Comparison
7. MTF and PSEDYS
8. Bot vs TradingView Validation
9. Practical Exercises
10. Cheat Sheet

1. What is CMF? Concept and Origin

CMF (Chaikin Money Flow) was created by **Marc Chaikin** as an oscillator version of the A/D Line. CMF normalizes A/D over a sliding window and expresses accumulation/distribution pressure as a value between −1 and +1. Unlike the A/D Line (unbounded cumulative), CMF is bounded and easier to interpret.

2. Calculation Formula — Complete

```
CLV[i] = (2×Close[i] - High[i] - Low[i]) / (High[i] - Low[i])
MFV[i] = CLV[i] × Volume[i]

CMF[i] = Σ MFV[j] / Σ Volume[j]    for j = i-period+1..i
```

Standard period: 20 (or 21)

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS

Range: −1 (complete distribution) to +1 (complete accumulation)

Verification bar 20:

```
Σ MFV[1..20] = −10703.86
Σ Vol[1..20]  = 56701

CMF[20] = −10703.86 / 56701 = −0.1888  ✓  (slight distribution)
```

CMF Table bars 20–50:

Bar	CMF	Zone
20	**−0.1888**	BEAR
25	−0.0480	NEUTRAL
30	−0.0742	NEUTRAL
35	**+0.1219**	BULL
40	**+0.1555**	BULL
45	+0.0195	NEUTRAL
50	+0.0191	NEUTRAL

3. Interpretation and Levels

CMF	Interpretation
> +0.25	Strong accumulation
+0.10 to +0.25	Moderate accumulation
−0.10 to +0.10	**Neutral**
−0.10 to −0.25	Moderate distribution
< −0.25	Strong distribution

Zero-line: CMF = 0 → balance between accumulation and distribution over N bars.

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS

4. Lag and Warm-up

```
First CMF value: bar period = bar 20
Warm-up: period bars
Lag: (period-1)/2 = 9.5 bars (rolling sum)
No additional smoothing
```

5. Trading Signals

Zero Cross

```
CMF cross zero bullish (from negative to positive):
  Accumulation pressure exceeds distribution over N bars
  → Moderate Long signal

CMF cross zero bearish:
  → Moderate Short signal
```

OB/OS Extreme

```
CMF > +0.25: aggressive accumulation → sustained bullish trend by smart money
CMF < −0.25: aggressive distribution → bearish trend with active sellers
```

Divergences

```
Price HH + CMF LH: distribution at new highs → bearish divergence
Price LL + CMF HL: accumulation at new lows → bullish divergence
```

Combined Filters

```
entry_long = (
    cmf > 0.1 and              # confirmed accumulation
    cmf > cmf_prev_10 and      # rising CMF
    ema_stack_bullish and
    adx > 20
)
```

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS

6. CMF vs A/D Line vs OBV — Comparison

Aspect	CMF	A/D Line	OBV
Output	Oscillator (−1/+1)	Cumulative (unbounded)	Cumulative (unbounded)
Period	Rolling N bars	Cumulative all-time	Cumulative all-time
Normalized	Yes	No	No
CLV	Yes (proportional)	Yes	No (all volume)
Interpretation	Direct (±0.25 = strong)	Relative to trends	Relative to trends

7. MTF and PSEDYS

```
# Trend confirmation with CMF
cmf_bull = cmf > 0.1 and cmf > 0     # moderate+ accumulation
cmf_bear = cmf < -0.1 and cmf < 0    # moderate+ distribution

# Entry filter
entry_ok = cmf_bull and ema_stack_bullish_4h
```

Level	Timeframe	Usage
Macro	4H	CMF > 0 = macro accumulation (Long bias)
Meso	1H	Rising CMF + > 0 = timing
Entry	5M	No (too slow)

8. Bot vs TradingView Validation

```
□ CLV = (2×Close - High - Low) / (High - Low)
□ MFV = CLV × Volume
□ CMF = Σ(MFV, period) / Σ(Volume, period)
□ Standard period: 20
□ Tolerance: < 0.001
```

Python Script:

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS

```
def cmf(highs, lows, closes, volumes, period=20):
    n = len(closes)
    clv = [(2*closes[i]-highs[i]-lows[i])/(highs[i]-lows[i]) if highs[i]!=lows[i] else 0 for i in
    mfv = [clv[i]*volumes[i] for i in range(n)]
    cmf_v = [None]*n
    for i in range(period-1, n):
        sv = sum(volumes[i-period+1:i+1])
        cmf_v[i] = sum(mfv[i-period+1:i+1])/sv if sv>0 else 0
    return cmf_v
```

---

9. Practical Exercises

Exercise 1: CMF = +0.31 with price at major resistance

Situation: BTC 4H. Price at 3-month resistance. CMF = +0.31 (strong accumulation). ADX = 28.

Response: High probability of breakout — Long on confirmation. High CMF at resistance = smart money aggressively accumulating at that level → breakout pressure. Long entry on the bar closing **above resistance** with RVOL > 1.5. SL below broken resistance.

Exercise 2: CMF diverges bearish

Situation: ETH 4H. Price makes the 3rd HH. CMF drops from +0.28 to +0.08 to +0.02 at the 3 HHs.

Response: Progressive distribution — exit Long / prepare Short. CMF decreasing at each HH = gradual distribution. At the 3rd HH with CMF near zero = smart money near complete exit. Reduce Long position by 50%, tight trailing SL. Short on the first bar closing below EMA 20 on 4H.

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS

10. Cheat Sheet

Concept	Value / Rule
CLV	`(2×C−H−L) / (H−L)`
CMF	`Σ(CLV×Vol) / ΣVol`
Range	−1 to +1
> +0.25	Strong accumulation
< −0.25	Strong distribution
Zero cross bull	Accumulation > distribution → Long
Standard period	20
Warm-up	20 bars
vs A/D	CMF: bounded oscillator; A/D: cumulative
Div. bearish	Price HH + CMF LH
Cause #1 error	Close vs Close[i-1] instead of CLV

PSEDYS CMF Technical Manual v1.0 — May 2026

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS

Downloaded from PSEDYS Ecosystem | t.me/PSEDYS