

I. - 31\*#43\*. - . ' 3) & ž &\$183' 1\*" 3. ' 3) & Ž" \$\* \*\$I. , , 4- \*38 3 3) & '\*123/" 13. ' 3) &! - \*38% Ł " 3\*. - 29ž &\$183' 187′ & &1" +9218/. 13. - :ł \$&" - 2" - %fl'6. ' 3) & ž &"; 3 3) & ž \*738& 3) , &&3^-(. ' 3) & fi'. 1, " +1. - 24+3' 35& Ž1. \$&22

V3=?; HM, H> NOWI CH, <P? >?P?F JG ?HN CHYAL; NC HI @NB? NBL?? >CG ?HNC HM @NOWI CH, <P? >?P?F JG ?HN H; G ?F5 ~?HPCI HG ?HN F MI=C; F; H> ?=I HI G G-W

Executive summary



7BLI CAB NB?  $64^*1$ , 8 + 61 4LI D'=N NB?  $64^*$ ; CG M; N NML?HANB?HCHA H; NC H; F?@PLNMCH @PH OL I @ CHL?; NJ>?=I HI G G ALI QNB @L NB? 4; =0000 LY QBGP; ; >POMCHA 4; =0000 AV; H> =I CHNL?MOLBGB Q; HN NI ?HA; A? QOB + 61 ; =NCPOC?MNI ; >I JN H; NC H; F L?ACF, N LS @; G ?QI LEML?KOCCCHA JL?=; ONC OM ?HPCLI HG ?HN F G; H; A?G ?HN JO<FG J; LNGO; NC H ; H> MI=CLCHA L?; MH; <F? ; H> ?KOCNI <F? ; LL; HA?G ?HNM 7B? 64\*1, 8 + 61 4LI D'=NB; M; NML HA @ =OMI H ; G CHOCMI E?BI F>?L ; JJLI ; =B`; H> =; J; =00000 COE>CHA @L ; FF 4; =0000 CM; H>?LM 7B00 AB; M F?> NI NB? >?P?FI JG ?HN I @ NML HA ; H> =I G JL?B?HNMP? H; NC H; F I @AMBI L? JI FG ?M ; H> F?ACM; NC H N; CF L?> NI MI=CLCHA NONAI CH; <F? >?P?FI JG ?HNI @4; =0000 AV; H> =I CHNL?NU>??J NJ; G CH?L; FL?MICL=?M@L NB? <?H?@NI @JL?NIHN; H> @ONCL? A?H?L; NC HM

## 1; LONG?) I OH>; LO?MBHON

9 OB NB? ?R=?JNC HI @4; JO, 2?Q. OCH?; `GINNU @NB? 4; = @2= MP, H> \*IOHNLO?M'4/\*M, B; P? NoL; FF, H> ; L?; M; MH GJ; L?> NI NB? F, LA? I =?; H M; =?M = I GG I HS EHI QH; MNB?, R=FOMOP?, = HI GG : I H?M ", ; :M[; H> NBCMB; M<??H JU =F; CG ?> <S NB? 4/\* MOH>?L CHYLH; NC H; F F, Q`NB? 8HCYP> 2; NC HM \*I HP?HNC HI H NB? Q Q I @NB? 6?; "82\*036/-IL?R, GJF?`70P, FO B; M, F, H>; L?; I @I HS I " NV/EG <ONOM, ; :; L?; OM JJU RCG; NPIS \$! " Z fIFI NV/EG / 7B? L; NC I @NB? = I G < CH? > F, H>; L?; M @ FFI I 4/\* 7M ; H> NB? NI N F, ; : (L?; OM/L'! I/

7B? G; HH?L & QB&B & GJI LN HNG; L&? L? MOL=? MOLB ; MODB? L&MOLB ; MODB? L&MOLS? COMMA; <? > G & P.L; RVI < C > C? LMAS; ; H> = HMALP; NC H? @ UNMG; LONG? N; HMI LN P?NVAFGI HON L&A; L? G; H, A? > ; H> AI P?LH? > QOBCH NB? , ; MI @4/\* M; L? >? @ P? > O H>?L 82\*0367 HNPLH; NC H; RS ; FI @ NB? 4; = @ MALH > \*I O HNL? M; M 6N; NP 4; LN? NN 82\*036; H> ; FF4/\* MNBI OF> >? JI NANQOB NB? 8HOP > 2; NC HMEH@ LG; NC H >? REP?; NEA NB? C, G; LONG? <I O H>; L? MI\*OLL? HNS " 4; = @ MALH > \*I O HNL? NB; P? >? @ P? > NB? I ONPL RG OM @ CM , ; M7B?L? ; L? ; JJU RG; NP IS Z%I P?LF; JJ & AI L NB; L? > , ; MOLB?L? H?AI NC NC HM; L? PON FN MANNP? NB? G; LONG? <I O H>; LS <? NQ?? H NB? C. TI H? M3 @ NB? Z% NB; L? > <I O H>; L? NTZZ G; LONG? NL?; NP MB? P? <??? H ND ==?NVADTS H?AI NC NP >; H> NAH? > <S NB? Q?; >? LM @ NB? 4/\* M7B?L? H?? >NN <? GI L? QI LE N



<u>\*1; MALF-0048?LO?M</u>

## 7B? 1 ; LC:P? 6?=NIL9 | LEC:HA. LI OJ

 $\begin{array}{l} \label{eq:starting} \textit{TB}(2:; 12:; 10G < ?L1 @L?AC H, F1 LA; HC; NC HM J?L; NEA CH NB? 4; = @E N NOJJI LNNB?C. L?M?=NP? G?G < ?LMC JF?G?HNL?AC H, F; H> H; NC H, FJI FCS; = NPOOD?MB; N= HNLCON? NIQ; L>MNB? NONAL CH, <F? > ?P?FI JG?HN G; H; A?G?HN; H> = HN2LP; NC H I @NB? I =?; H L?MOL=?M 7B? 1; LCF? 6?=NIL 9 I LCCA . U QJ ~1 69 . Q; M?NAI < FOXB? > NI CG JU P? = I L>CH; NC H ; H> = HF; <I L; NC H ; GI HANAI L?AC H, F I LA; HOMOL HM; H> NI ; >PODZI NB?C., R?=OND?MIH G; LCF?; H> = I; NAI F CAND?MI 7B? 1 69 . B; M<??H I J?L; NCFA NDE=?; U CH> I fIFIZ ; H> CMMG?G <?LMCEHC>? NBI N2 L?AC H, FI LA; HOMOL HMQ CDB G; H>; NP MCH I =?; H L2F, NP = CPNH; G?IS NB?'$ 

- 4; = 000= MM H> 1 LOG 6? = L? N LC N "4/-6.
- 6?=L?NLCNI@NB?4;=@C=\*IGGOHOOS ~64\*;
- 6?=1.?N LC: NI @NB? 4; =002=5?AC H; F, HPCI HG ?HN4U AL; G ~645, 4
- 4; = 000= MM; H>M+1 LOG 0048? LO? M(A? H=S "--(
- 8HCP?LNANSI @NB? 61 ONB 4; = COC= "864,

 $64^*$ ; H> --( \*I I \* B; CLNB? 1 69. ; H> CNCHEO>?M, HOG <?LI @ <N7LP?LM@ G I NB?LI LA; HCT; NC HM CHEO>CEA 82 6SNMPG `>I HI LM, H> = CPCENI=C?NS/

\*\*\* I) " +&- (&2 " - % . //. 134-\*3\*82 \*- \*-3&(1" 3\*- (3) & 3) 18& %, &-2\*.-2.' 2423\*-" #& %&5&+/, &-3 \*- 3) " 3 1&(" 1% \*-\$+4%\*-(, "33&12 6)\*\$), " 8 1&04\*1& '413) &1 \$ - 2%&1" 3\*.-6\*3) " 5\*&6 3 '. 23&1\*-( \*-3&(1" 3\*.-.'3) & 3) 1&& %, &-2\*.-2.' 2423\*-" #& %&5&+/, &-36\*3) 1&(" 1%2 3 . \$&"-2\*6\*3) " - &, /) " 2\*2.-" 1&" 26) &1& \$ . 1%-" 3\*.-" - % \$ . /&1" 3\*.-" 33) & \*-3&1(. 5&1-, &-3\*+" - %\*-3&1\*" (&-\$8 +&5&+2\$\$ 4+% #& &-)" - \$&%

#### +??J N21; G CEP?L; FM

 $\begin{array}{l} 6?=&\operatorname{CLCHA} \operatorname{NONM}(\operatorname{CH}, <\operatorname{F?}, >?\operatorname{P?F}(\operatorname{I}, \operatorname{G}, \operatorname{PNI}, \operatorname{@4}; =:\operatorname{QCE}, \operatorname{NM}(\operatorname{H}) = 1) \operatorname{CHNLC2}(\operatorname{NJ}) >??: \operatorname{I}(\operatorname{S}, \operatorname{CH}, \operatorname{FL?}, \operatorname{I}(\operatorname{I}) =:\operatorname{PM2}(\operatorname{ROL}, \operatorname{PM2}(\operatorname{I}) =:\operatorname{PM2}(\operatorname{I}) =:\operatorname{PM2}(\operatorname{PM2}(\operatorname{I}) =:\operatorname{PM2}(\operatorname{PM2}(\operatorname{I})) =:\operatorname{PM2}(\operatorname{PM2}(\operatorname{I})$ 



# <u>1;L0MC;?)IOH>;L07M8H0N</u>

. (P?HNB? L?H?Q?> (ENPL?NNI<S (#L?CAHG (ENEHA = IGJ; HC?MCHNB? L?ACCH(#L?RJFLL; NCCHIL?RJFLC) NCCH (@) NCCH (@)??JN2; G (E+?L; FN1; MQ?FF; ML?JILNEHA I (@) (P?-?JN2; G (C+?L; FN1; MQ?FF; ML?JILNEHA I (@) (P?-ACCHT NB? (P?; >?LMI (@) NB? 4/\* M; L? <?ACEHCHA N\_L?I?GJB; NAC2INB? (GJILN) H=? I (@) (PLG; FFS (PN2) <RCNBCEHA NB?(C.H; NCCH; FG; LONG? <I OH>; LC?MCEH; F?A; FG; HH?LZ

1; LONG? <1 OH>; LS >?FCG 0; NC H =; H1 HIS <? OH>?LIVE?H <S MIP?L?QAH =1 OHNL?MI; H> NB? 1; LONG? )1 OH>; L2 M8H0; N 64\* =1 HNCHO?MIN JU PG? G?G <?L =1 OHNL?MQ.05B NB? EHI QP?>A? `N I FM; H> NOUJI LNN >?P?FT J ?H>OLCHA MIFONC HWCH; ==1 L>; H=? Q.05B CHN?LH; NC H; FF; Q.7 780.4001 HIS JI NM2; F? NBLI OAB =TT N21 =1 L>CH; NC H Q.05B; F; LA? =1 HWILNCOG I @M?=C; F0.MM; H> J; LNH?LWCH=O>CHA NB? 4; =02= M2 H>M -1 LOG - 0.08?LC?M (A?H=S` . ?I N4C?H=? (OWL; FC` 7B? \*I G G I HQ?; FNB 6?=L?N LC; N 82 , HPCJ HG ?HN 4U AL; G G? . 5/+1 (L?H>; F (OWL; FCH (NILH?S). ?H?L; F0M +?J; LNG?HN ; H> NB? 8HCP?LM00S I @6S>H?SY 7B00/H FF; <1 L; NCP? ?00P LN F?; > <S 64\* JU PG?MNB? @ OH>; NC H @ L CG JU P?> I =?; H AI P?LH; H=? ; H> G; H; A?G?HN; H> @ L N2=OLCHA LQABINM P?L 000S I JJI LNOHOD?M

## <u>3=?; HG=-0087LO?M</u>

7B? 3=?; HG= @0.88? LC? M.2. MOL=? M @NB? 4; = @26  $\pm$  J; LNGOF; LIS NB? NDH; @0.88? LS 0.4H NDDNNI < (A + 0.100 / BOA?) + ; H> POSI FFS (G J I LN; HNN NB? 4/\* 7 M 7 B? NN; NOM @NNI = EN (# LNGO ()) = E  $\pm$ ; Fc; = I L?; H> S? FFI Q @CH NDH; M L? HI NCH; H I P?L@0.88? > NNI N? BI Q? P? L' @0.86 CHA ? @4 LNGO ()) = E  $\pm$ ; Fc; =I L?; H> S? FFI Q @CH NDH; M L? HI NCH; H I P?L@0.88? > NNI N? BI Q? P? L' @0.86 CHA ? @4 LNGO ()) = E  $\pm$ ; Fc; =I L?; H> S? FFI Q @CH NDH; M L? HI NCH; H I P?L@0.88? > NNI N? BI Q? P? L' @0.86 CHA ? @4 LNGO ()) = E  $\pm$ ; Fc; =I L?; H> S? FFI Q @CH NDH; M L? HI NCH; H I P?L@0.88? > NNI N? BI Q? P? L' @0.86 CHA ? @4 LNGO () = E  $\pm$ ; Fc; =I L?; H> S? FFI Q @CH NDH; MI L? HI NCH; H I P?L@0.88? > NNI N? BI Q? P? L' @0.86 CHA ? @4 LNGO () = E  $\pm$ ; FC; HNI CHA = HNCHO? NNI CHL?; NNI CHL?; NNI CHL?; NNI CHL?; MI P? L@0.87? S? NDH; NNI = E 0.46; H I P?L@0.87? > NNI N? 71 N FNOH; =; N=B CH NB? Q? NNI H; H> =? HNL; F4; = @26 Q; M P? L I // G OFFC H G ? NLG= N HNCH I FILŽ / 1; H; A? G ? HNI @NB? @0.88? LS =I HNCHO? NNI <?; =B; FF? HA? <ON (G J LI P? G ? HNM; L? J I NM02; F? NBLI OAB NB? ON/I I @ G; H; A? G ? HNI @; G ? QI LEMI CHHO>CHA NB? M? = @26; NC H I @1 < D' = ND? NIL? @L? H=? J I CHM; H> NB? (G J F? G ? HNI NC H I @8; LP? NNI=I HNL FLO?? MI

7B? 64\* QOB @H>CHA NOUJILN@IG OM>IHILJ; LNH?LM, H> CH = HF; <IL; NCH QOB NB? 9?NMPLH; H> \*?HNL; F-03B?LC?M\*IG G 00M0CH "9\*4-\* = HNCHO? NIJF; S; H; =NCP?; H> 0CG JILN; HNLI F? CHJLI PC>CHA NB? 9\*4-\* QOE PON; FINAL = E; NM21NM0C; PHN>; NI; H> N4C2 HNCOS; PCP? NI?H; <P? NB? 9\*4-\* G; E? JLI; =NCP? >?=000CHMIH ?@?#NCP? = HNCHLP; NCH; H> G; H; A?G?HNG?; NOL?M@L NDH; @COB?LC?M